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IRISH HOSPITAL GAZETTE.

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Hospital Reports.

ROTUNDA LYING-IN HOSPITAL.

CASE OF PLACENTA PRÆVIA SUCCESSFULLY TREATED BY "BARNES' BAGS."

By A. V. MACAN, M.B., M.Ch., Dubl.,
Assistant Master to the Hospital.

As Placenta Prævia, though happily so rare, is a complication which everyone who is engaged in midwifery practice may at any moment be called upon to treat, the following case of complete placenta prævia, in which "Barnes' Bags" were used to dilate the os so as to allow the operation of turning to be performed, and in which both mother and child were saved, may prove interesting.

CASE.—Anna F——, æt. 25, was admitted into the Rotunda Hospital, on November 4th, at 8.30 P.M., having been attacked about half an hour before her admission with most violent hæmorrhage. It was her fourth pregnancy, all the previous ones having been, as far as could be gathered from her account of them, natural. The date of the last appearance of the catamenia was March 17th. She had noticed nothing unusual about her present pregnancy till October 11th, on which day she had a smart attack of hæmorrhage, which commenced at 5.30 A.M., while she was in bed, without any warning or apparent cause. Though the hæmorrhage was not much more profuse than it had sometimes been at a catamenial period, still, occurring when it did, it frightened her so much that she determined to come into Hospital. Having waited, however, to prepare her husband's breakfast, suddenly at 9 A.M. the discharge ceased, from which time up to the day she was admitted she had experienced no return. About half an hour before her admission she was again suddenly attacked by hæmorrhage while standing in a shop. The quantity of blood lost was so great that, to use her own expression, she thought it was the waters that were coming away, till she looked down and found herself standing in a pool of blood. This naturally gave her a great fright; and, having first gone to her home which was in the immediate neighbourhood to tell her husband what had happened, she lost no time in coming into Hospital.

Immediately after her admission she was seen by our head midwife Mrs. McGrath, who at once sent for me and in the meantime endeavoured to get her to bed. As the woman was in the act of getting on the bed there was a splash on the floor, which Mrs. McGrath said sounded as if the afterbirth had come away, and entering just at the moment, I found the woman standing beside a mass of clotted blood which the exertion had dislodged from the vagina. I at once placed her on the bed and proceeded to make a vaginal examination, the hæmorrhage at the time not being excessive. On passing the finger into the vagina the os was found very high up, and about the size of a shilling. The cervix was fully taken up, and the os felt thin, soft, and dilatable. On passing the finger through the latter, the placenta was found filling it completely; anteriorly the placenta was still adherent to the edge of the os, but posteriorly it was detached for some distance. As the hæmorrhage was considerably increased by the examination and the woman's pulse already a good deal affected, and as there was no sign of uterine action, the question of the immediate treatment was most urgent. The indications for treatment were, I need hardly say, first, to arrest the hæmorrhage; second, to dilate the os, so as to render turning possible; third, to bring on uterine action.

The first two of these indications would, I thought, be perfectly fulfilled if I introduced one of Barnes' hydrostatic bags through the os, and injected it with water. The pressure on the os thus caused would also tend to bring on uterine action, and help to fulfil the third indication. I therefore determined to try this plan of treatment, supplementing it with full doses of ergot and a stimulating enema, in order to bring on uterine action as soon as possible.

Having then emptied the bladder, and given the woman a full dose of ergot with two ounces of brandy, I proceeded to introduce No. 1 of "Barnes' Bags." As the success of this plan of treatment depends in a great measure on attention to certain minor points, I may be excused for describing the operation in detail.

On one side of each bag and near its larger end is a small pouch or pocket, put there in order that the bag may be passed within the os by means of a sound or catheter, the end of which is inserted into this pouch or pocket. In order to make the bag smaller and thus facilitate its introduction, I think it is better to fold the bag longitudinally in three, so that the pouch will be outside, and then to grasp the bag thus folded in a pair of ordinary speculum forceps; one blade of these should be inserted into the pouch, while the other fixes the two sides that

have been folded inward, so that the bag and forceps together have the form of a cylinder. When thus folded, No. 1 bag can be introduced without difficulty through an os not larger than a shilling. The woman being placed in the ordinary obstetric position you introduce the forefinger of the left hand into the vagina, and having found the os, pass the bag folded as above and well covered with lard, along the index finger, and so without difficulty into the os. The end of the bag must be passed well inside the os, and keeping the forceps still *in situ*, you proceed slowly to fill the bag by means of an ordinary syringe, or of a small air syringe made for the purpose. Before injecting you must loosen the hold of the forceps on the bag in order to allow it to expand; but you must not withdraw the forceps, or the bag will most likely be forced downwards out of the os, as it becomes inflated, and when the operation is completed, all you will have accomplished will be to plug the upper part of the vagina. To avoid this, keep the forceps *in situ* while you are filling the bag, and the blade that is inserted into the pouch will keep the bag well within the os till it is so full that it cannot be forced downwards. While the bag is being filled, the forefinger of the left hand should never leave the os; in order to make certain, first, that the above described accident does not occur; second, to judge of the amount the os is yielding under the pressure of the bag, and thus to determine the proper rate at which to inject the water; and, third, to notice when the bag itself is becoming over distended and is in danger of bursting. When the finger thus applied perceives that the os no longer yields when more water is injected into the bag, but that the bag itself is being expanded, the injection should cease for some time, as the moment the bag becomes distended beyond its normal size it begins to lose power; or in other words, the thinner the walls of the bag the easier does it expand on each side of the os, and the less force is exerted to expand the os. Once, then, a bag is distended to its natural size, we should wait till the os has become dilated to the same size, and then, instead of trying further to dilate the os with the same bag, rather remove it and replace it by the next larger size.

In using these bags in cases of complete placenta prævia, it is obvious that should the placenta still be adherent all round the os, we must first with the finger detach enough of it to allow of the bag being introduced, or trust to the forcible introduction of the bag doing this, which seems to me a much more uncertain method. In a case of partial placenta prævia of course nothing of the sort is necessary.

In the present instance, having introduced No. 1 bag and inflated it, the os yielded so readily that I determined to remove it at once and replace it by No. 2 bag, judging that when the os had become dilated to the size of this bag, the operation of turning would be quite possible.

Once the bag had put the os well on the stretch any external hæmorrhage was impossible. If there had been any uterine action, I would have thought that internal hæmorrhage was equally impossible. As, however, in the present case there was no uterine action, I watched anxiously for any symptom of internal hæmorrhage, but there was none. I now ordered the patient to get another dose of ergot and a stimulating enema, hoping thereby to fulfil the third indication above mentioned. In a very short time the hand placed on the abdomen was able to perceive a slight contraction of the uterus, the woman at the same time complaining of a pain in the back. I now left her, giving orders to be called if any hæmorrhage should appear externally, as I thought the bag might possibly be forced out of the os if the pains became strong. I returned in about half an hour and found the pains getting stronger and the os much more dilated. As the bag would still bear a good deal of distension, I injected some more water into it, and then waited a quarter of an hour, at the end of which time I determined to remove the bag, and, if possible, turn.

On removing the bag I found the os fully three-fifths dilated, and so, having given the patient another glass of brandy, I put her under chloroform, and proceeded to turn.

On passing my hand into the vagina and getting my fingers inside the os, I found that though the placenta still extended beyond the os, it was separated completely posteriorly, and having without difficulty reached the membranes, I ruptured them and found the head presenting. On endeavouring to pass the whole hand into the uterus to reach the feet, I found the os was still too small to allow me to do so, but by means of the left hand applied externally to the fundus, I was enabled to get a foot within reach of my two fingers in the uterus, and drew it down without difficulty. The resistance to the extraction increased greatly when the half breech became engaged at the os, and as I feel certain that rupture through the cervix occurs as often, if not oftener, when the half breech is passing the os, as when the head is, I proceeded with the extraction very slowly at this point, passing the forefinger of one hand into the vagina and endeavouring as it were to prise the os over the half breech. When the body was born the arms were found to be extended above the head, and were tightly embraced by the os. I regret that in the hurry to bring them down I fractured the left clavicle. The child, which only weighed 4lbs. 9oz., was deeply asphyxiated when born, but at the end of ten minutes, during which

time all the usual restorative measures were tried in turn, it gave a feeble cry. Hardly any hæmorrhage followed the birth of the child and very little the expulsion of the placenta, but as the woman was already greatly weakened and the loss of even a small quantity of blood therefore very important, I at once injected the vagina with cold water and the bleeding immediately stopped. (I may mention that the liq. ferri perchlor. was in readiness, if there had been the slightest attempt at *post partum* hæmorrhage.)

I think I am correct when I say that the woman hardly lost ʒviij of blood from the time the first bag was introduced to the end of the case.

After a binder had been applied I found her pulse so good that I thought it unnecessary to give any more stimulants and ordered her a full anodyne instead.

From the time the woman was admitted into Hospital till she was delivered was not more than an hour and a quarter; "Barnes' Bags" could not therefore have been *in situ* more than three-quarters of an hour, and if there had been any symptoms which rendered it imperative that the woman should be delivered at the earliest possible moment, I feel sure that by distending the bag sooner to its fullest extent, the os would have been sufficiently dilated in half an hour after its introduction to render the operation of turning possible.

This patient recovered well; she had a plentiful supply of milk, and was able to get up, though not very strong, on the fifth, and left Hospital on the eighth day. The child had greatly improved since its birth, and gave every promise of living.

Remarks.—That Barnes' Bags would in all cases of placenta prævia lead to a result similar to the above is, of course, not to be expected. Indeed, the exact amount we may think they contributed to that result depends, to a great extent, on the *post hoc propter hoc* argument.

That they are especially suitable in cases of placenta prævia, will be more apparent if we consider more closely the mechanism in any case where the presentation is complete.

Placenta prævia has long been known to have a direct effect in increasing the time occupied in the dilatation of the os. This is due first, to the thickness of the placenta which prevents its being forced like the bag of waters, into the os till the latter is already considerably expanded, and is analogous to a case of early rupture of the membranes when the head presents; and secondly, this feeble dilating power acts on an os which is tied down and prevented from expanding by its connection with the placenta. Now by the proper use of "Barnes' Bags" both these mechanical disadvantages are removed. For when the bag is introduced within the os and inflated, it fulfils perfectly the functions of the natural bag of waters; and in the very act of expanding it must separate a considerable area of the placenta from the cervix, thus allowing the os to dilate more readily. The one theoretical objection that can be urged against their employment is, that they merely tend to turn external hæmorrhage into internal, which is a far more dangerous form. That the bags had not this effect in the case just related is evident, and I can myself see no reason why internal hæmorrhage should follow their use any more than that of the ordinary plug. That there can be no external hæmorrhage when the os is fully stretched by one of the bags is obvious, and if no symptoms of internal hæmorrhage arise, we may without being the least uneasy wait any length of time, till the other means used to bring on uterine action have been effectual.

In cases of partial placenta prævia where the os being still very small there is no uterine action, or in cases where, with slight uterine action, the rupture of the membranes has proved insufficient to arrest the hæmorrhage, "Barnes' Bags" would, I think, be of great use, both in stopping the hæmorrhage by direct pressure and also in expanding the os so as to render turning possible.

NORTH INFIRMARY, CORK.

CASE OF AMPUTATION ABOVE THE ANKLE-JOINT—RECOVERY.

Under the care of Dr. HOBART,
Surgeon to the Infirmary.
Reported by Mr. Martin Howard, *Resident Pupil.*

Jeremiah D——, æt. 55, milesman, was admitted into the North Infirmary on Friday, 16th October, at 1 P.M.

While working on the G. S. & W. Railway, at the mouth of the Cork tunnel, the carriages of an arrival train came unawares upon him; the step of the first carriage knocking him down, and the wheels of the next passing over the right foot, before he was rescued from his perilous position.

On being brought to Hospital, the first difficulty that presented itself, was the removal of the patient's boot—a tightly-laced blucher—which had been pressed so firmly against the front of the foot, that the leather had cracked, and the soft parts were pushed through the rent. By cutting the sole off the upper, and then slitting up the stocking, the nature of the injury was however revealed.

The tarsus, metatarsus, and phalanges were crushed and broken, the three cuneiform bones being driven outwards through the skin. The external malleolus was also fractured. The soft structures in the neighbourhood were all torn away; and from the os calcis extended upwards

a lacerated wound, three inches long, the muscles being dragged aside, and the bone exposed.

Immediate amputation was decided on. Dr. Corby, the House-Surgeon, controlled the hæmorrhage, while preparations were being made for the operation; but the pulsation was so great, that though the tourniquet was on, he could scarcely retard the flow.

Teale's amputation was considered the best under the circumstances, for it was deemed advisable, taking the age and condition of the patient into account, to keep clear altogether of the wound above the os calcis, and, moreover, in this case the limb need not be removed much higher up than in the ordinary methods. Chloroform having been administered, the soft parts were cut away, the bones divided, and the vessels tied. The long flap was then folded over the end of the bone, and united with the short flap by sutures. Lint rung out of carbolic oil was applied, and the limb lightly bandaged. A cradle, attached to a pillow, protected the stump from pressure.

On the night of the day of operation, the patient was going on well; pulse 72; temp. 100°·4; no hæmorrhage.

20*th.*—Dressing changed this morning; upper of outer part of anterior flap sloughing; rest united by the first intention; pulse 96; temp. 100°·6.

22*nd.*—Had a rigor at midnight, ushered in by heat, and followed by copious perspiration; pulse 98; temp. 102°. Dressing changed; sloughing going on well; bowels confined; tongue dry and furred. Ordered an enema containing ℥ii ol. ricini in a pint of starch, and a haustus opii (mins. xxx) at bed hour.

Nov. 28*th.*—Slough quite healed; stump looking very well; all ligatures but one have come away; pulse 78; temp. 98°. Put upon full diet; carbolic dressing given up, and dry lint applied.

Dec. 2*nd.*—Remaining ligature cut down on this morning and removed; found deeply imbedded in new structures thrown out between the bone and skin.

6*th.*—Stump healed and looking well; patient easy and in good spirits, and anxious to leave Hospital, being able to move about the Ward on crutches.

Original Communications.

ANEURISM OF CŒLIAC AXIS—CARDIAC DISEASE—RUPTURE OF SAC—DEATH.

By ROBERT S. ARCHER, M.B., M.Ch., Univ. Dub., House Surgeon—Hospital and Dispensary, Weston-Super-Mare.

CHARLES P——, æt. 41, pensioner, who had served in the army for a period of 21 years and four months, of which time nearly ten years were spent in India, sought advice at the Weston-Super-Mare Hospital and Dispensary about five months after his discharge from the army, on September 6, 1873. Had an attack of syphilis about nine years back. He was much emaciated, and his countenance bore a care-worn, anxious expression. His chief troubles were pain and "throbbing" in epigastric region, and "pain in back." His stomach was very irritable, not being able to keep down ordinary food for any length of time. A strong distensile and equable heaving impulse could be both seen and felt in the epigastrium. On placing the patient on his hands and knees, *the pulsation was slightly lessened.* Impulse and dulness extended from ensiform cartilage to within about one inch of the umbilicus, and transversely to the extent of about six inches. A "buzzing" bruit synchronous with the first cardiac sound was audible on applying the stethoscope over the tumour.

From these symptoms I diagnosed an aneurism arising either high up from the abdominal aorta, or else from one of its first branches.

The apical impulse could be seen between the sixth and seventh ribs in a vertical line with the nipple. A systolic murmur was heard over the apex, and also over the basic region. The latter could be traced up the great vessels and down the spine till it lost itself in the "buzzing bruit" connected with the tumour. The second sound at the base was muffled and indistinct. The cardiac murmurs were quite audible in the axillary regions, in the scapular regions, and, in fact, in all parts of the chest. Visible pulsation was present in all the superficial arteries.

September 12*th.*—Was admitted into the house to-day, suffering from suppression of urine (which was soon relieved). Complained much of pain in back and abdomen. The abdominal pain was periodic in character, at times being "almost unbearable," at others entirely absent.

19*th.*—Pain in scapular and inter-scapular regions.

20*th.*—Much troubled with singultus and "the pain" in epigastrium; the latter was relieved by lying on right side.

25*th.*—Tumour increased in size, forming a well-defined prominence, situated towards the left side of the epigastrium. Impulse increased and more of a "heaving" character.

Oct. 4*th.*—Complained of very great pain in epigastrium. Had a bad night.

5*th.*—Found dead in his bed this morning. Did not disturb any of the other patients during the night.

The more urgent symptoms were, from time to time, mitigated by treatment, but the high position of the tumour and its proximity to the central organ excluded all hope of rendering the patient any permanent relief.

Post Mortem Examination.—About thirty hours dead. Body much emaciated. Rigor mortis well-marked.

Thorax.—On opening the chest, the lungs collapsed to their usual extent. These organs were quite healthy, with the exception of some slight hypostatic œdema. Right lung was bound down by old adhesions; pericardium healthy; heart somewhat hypertrophied, looked anæmic; white "spot of Baillie" very large and sharply defined. I removed the heart, &c., and exposed the cavities in the usual way. The intima of the first stage of the aorta was roughened and corrugated, on section it creaked under the knife, and had a cartilaginous lustre. The calibre of the aorta was narrowed just above the semilunar valves, owing to the diseased condition of the internal coat. The semilunar valves were very rigid, much thickened (especially at their free borders), and contained numerous small flat nodules in their meshes.

The curtains of the mitral orifice were very rigid, much thickened, nodulated, and had quite lost their delicate web-like appearance. The orifice itself was of normal size, &c.; it admitted two fingers. The pulmonary artery and its valves were perfectly normal, and also the tricuspid orifice and its valves.

Abdomen.—The abdominal cavity being opened the sac of an aneurism became visible, situated above, and, as it were, embraced by, the lesser curvature of the stomach. It was collapsed, and an opening surrounded by clotted blood was discovered in its anterior wall. When fully distended it must have been the size of a large-sized fist. It was tied down by firm adhesions to the lesser curvature of the stomach and pancreas, and very careful dissection was necessary to isolate it. It was found to involve the cœliac axis, arising immediately at the origin of that vessel from the aorta. The sac communicated directly with the aorta by means of a round opening, which would admit the little finger, and was prolonged up along the great vessel to the distance of about an inch. Besides the rupture in the anterior wall of the sac, there was a slit of about ¾ inch in extent on its postero-inferior aspect. Around this externally were adhering some shaggy clots of blood. The part of the sac in which this slit existed was very much thinned to the extent of the size of half-a-crown, exhibiting internally a well-marked patch of ulceration with irregular edges. Another patch of ulceration of about equal extent existed on the right inferior wall. The sac contained not a trace of fibrin. Its lining membrane (except where the ulcers were situated) was thrown into irregular puckered folds. The superior mesenteric artery was adherent to the back of the tumour for some distance after its origin, the renal arteries were quite free, the aorta, above and below appeared tolerably healthy; liver enlarged, exsanguine and friable; spleen appeared healthy, but pale; the kidneys were slightly enlarged; the other abdominal and pelvic viscera were healthy. It will scarcely be necessary to add, the depending parts of the abdominal and pelvic cavities were filled with clotted blood. The cranium was not opened.

Remarks.—Compression of the aorta, either proximal or distal, has been recently employed in the treatment of abdominal aneurism. Owing to the high position of the tumour, the former method was quite out of the question in this case. The light thrown on the case by the autopsy shows how utterly useless distal compression applied to the abdominal aorta would have been, as it could not possibly have commanded the current of blood through the sac, but, on the contrary, would have increased it, and thus have anticipated the fatal issue, by causing earlier rupture of the weak parts of the aneurismal tumour, if, indeed, death from peritonitis did not result from such treatment.

Mr. Bryant records a case (*Med.-Chir. Trans.*, Vol. IV., p. 225) which proved fatal thirty-nine hours after the first application of distal compression, from the latter cause.

Professor Moore, of Dublin, in a paper "On the Differential Diagnosis of Abdominal Aneurism,"(1) says, "for my own part, I consider persistency and equability, after a careful examination in all positions, the most characteristic features of abdominal pulsation; consequently, when we meet with an abdominal tumour of any kind carrying pulsation in the supine position, place the patient on his hands and knees, when the pulsation, if due to an aneurism, *will persist*, but if due to a tumour overlying the vessel, the pulsation will disappear from the tumour falling off the vessel, unless they are firmly attached by adhesions." I am inclined to think that in a case of aneurism of the abdominal aorta, not only would the pulsation "persist" in the prone position, but also be somewhat increased. In the case under consideration, "on placing the patient on his hands and knees, *the pulsation was lessened*," a fact which, I think, may be explained by regarding the pulsation as being made up of two factors (1) the impulse of the blood passing through the sac itself, *plus* (2) that communicated by aorta lying behind. It will easily be perceived that by placing the patient in the prone position, the aortic shock would be removed to a greater or less extent, and, consequently, the force of pulsation lessened in proportion.

The pathological condition of the first part of the aorta was the initial stage of endarteritis deformans, which, according to Virchow, is a very common disease of advanced age, and concerning

(1) *Dublin Quarterly Journal of Medical Science*, August, 1869.

which Niemeyer(1) remarks, "it is always at the points most exposed to strain or distension, such as the ascending portion of the arch of the aorta, and the places of origin of the vessels which pass off laterally, that the disease (endarteritis deformans) is most apt to occur. In the second place the disease is most *frequently found* to affect gouty, rheumatic or syphilitic persons, as well as drunkards." I think we may safely put down syphilis as the cause here both of the aortic and valvular diseases, and also possibly of the diseased state of the vessel favourable to aneurism.

Original Lectures.

CLINICAL LECTURE ON A CASE OF SYPHILITIC PARALYSIS.

By WILLIAM MOORE, M.D., F.K.Q.C.P.I.,
King's Professor of the Practice of Medicine, Physician to Sir P. Dun's Hospital, &c., &c.

GENTLEMEN, I wish to lay before you a case of unusual interest. It has been carefully and attentively reported by Mr. J. E. Thompson. It is that of Ann N——, aged 23, who was admitted into this Hospital on the 7th December, suffering from paralysis. The history of her case is as follows:—About two years ago the patient contracted syphilis, which was followed by buboes, and she then had slight sore throat, but she never had any eruption on her skin. A year after that she came into this Hospital complaining of pains about the knee-joint. She was afterwards admitted into St. Mark's Hospital where she was treated for ptosis of the left eyelid. About a month ago she had a "fit," which she describes in this way:—She was completely unconscious, but only for a very short time, not more than ten or fifteen minutes, when she regained perfect consciousness. She was told she did not scream or make any noise, nor did she froth at the mouth, or bite her tongue; she had no drowsiness or dulness for the rest of that day, but on recovering from this fit she had loss of power of the left leg, and in a short time after she also lost the power of the right arm.

On admission into this Hospital there was visible deformity of the face and loss of power of the right arm and right leg, and on making a careful examination we found that she had complete deafness of the left ear, but no discharge from the ear. She also told us that she had at times complete loss of taste, which the nurse says she exhibited on Saturday last when she emptied the entire salt cellar into her beef-tea, but did not taste it. She complains of pain when you touch her right cheek, but as far as we can see, she has no hyperæsthesia of the left side. She suffers from constant headache and pain at the nape of the neck, which she says is persistent, especially when she sits up. She also complained of pain in the right temple. When you look in her face you are struck with the evident facial paralysis of the right side. At the same time she has not perfect power over the left side of the face, for there is drooping of the angle of the left side of the mouth, and there is also partial ptosis of the left lid. She also has a peculiar condition of the pupils. There is comparative contraction of the left pupil, but it takes an oval shape, the long axis being from above downward. When you look at the other eye you find partial ptosis and a permanently dilated condition of the right pupil; there is also loss of power of the sixth nerve, for when she opens both eyes they roll outwards, so that she has double divergent strabismus. She tells us that when she first got this attack her speech was affected, she reversed the names of her friends, called things by wrong names, and in addition she has still remarkable amnesia. She is positive that she sees double when she looks with both eyes at things removed a few yards distant; but if she closes one eye the object appears single. When you place her in the upright position she complains of giddiness, and is unable to make any progress, and if you place her heels together and make her close her eyes, she reels and staggers. She complains of pains over the right shoulder joint, but there is no loss of sensation down the right arm; yet she has little power of prehension, and cannot close her hand or raise the arm.

The patient's father or mother did not die of any paralytic affection, and there is no history, as far as we can gather, of paralysis. Therefore, taking into account her past career, we can trace this disease to a syphilitic taint. Now, I wish to show you how this form of paralysis differs from a case of ordinary hemiplegia, in which we usually have no complaints of constant pain over the forehead, or in either temple, or at the nape of the neck; nor have we double ptosis, or double divergent strabismus, or double facial paralysis. Some time ago this girl had more complete facial paralysis; and she had complete ptosis of the left lid; now she can raise it a little, and the left side of the face has regained its power to a great extent.

The hemiplegia is not perfect, inasmuch as she has a certain amount of power of both the right arm and leg, but, with the exception of the right knee-joint, the sensibility of the extremities are unaffected; in fact the application of electro-galvanism was more sensibly felt on the affected side. There is no appreciable difference in the temperature on either side of the head, no sugar or albumen in the urine, and her pulse is 88 in the recumbent, 98 in the upright position.

And now with regard to the "fit" which preceded the hemiplegia. As you are aware, epilepti-

(1) *Text Book of Practical Medicine*, Vol I, page 897.

form seizures may be symptomatic of what we call true epilepsy, or they may occur during the course of diathetic diseases, or they may arise from specific causes as syphilis, and in these various forms of "fits" there are symptomatic differences which should deserve your attention. For instance, this patient says, she suddenly swooned and became unconscious, but her friends told her she did not scream, or froth at the mouth, or bite her tongue, nor did she remain in a dreamy, somnolent state for hours. On the contrary, she recovered consciousness within ten or fifteen minutes. Now this, in my mind, is precisely the character of a fit of syphilitic epilepsy, which, in this instance, was followed by aphasia and right hemiplegia.

I have here merely called your attention to the objective appearances of the eyes and their appendages, but Mr. Wilson has kindly informed me, that when the patient was under his care the fundus of the eye was rather paler than normal, and the arteries small, but the veins congested.

This patient reminds me, in many respects, of a case which I published in the *Dublin Quarterly Journal of Medical Science* in 1866, of a young woman, aged 24, who was admitted into Mercer's Hospital. Her appearance was anxious and careworn, though of a full, sanguineous habit of body. She stated that up to the period of her marriage, six years previous, she never had an hour's sickness, but from that time up till her admission, she had been continually a sufferer. Shortly after marriage she contracted syphilis, after which an eruption came out all over her body, attended with severe pains in all her joints and excruciating headache. These symptoms continued with short intermissions, till after the birth of her first and only child, which was born about a year after her marriage. She now sought advice and was freely salivated. The eruptions, pains and headaches were relieved for a short interval, till after fresh exposure to cold and hardship, they returned, when she was again treated with mercury. About this time she got drooping of the left eyelid, and strabismus of the left eye, and she gradually lost power of the entire left half of the body. On admission into Hospital, she was in a most helpless condition, having been assisted into the Ward by two persons. She had paralysis of the left half of the body, but there was no loss of sensation over the left side. She complained of great oppression, lassitude, and sense of weight in the back and loins, of continual headache and giddiness, and dimness of sight in both eyes. Under the use of iodide of potassium the paralytic symptoms disappeared.

You may naturally ask me what I believe to be the pathology of the present case. I consider that this girl is suffering from syphilomata or gummatous formations, engaging the meninges of the brain, the second, third, sixth and seventh nerves, and probably the cerebellum. I say engaging the meninges, from the presence of the epileptiform seizures she has had, and that the nerves I have mentioned are implicated, the imperfect vision, and the various phases of paralysis of the eye and face go to prove; whilst the giddiness, nausea, loss of vision, and ataxic, tottering, intoxicated mode of walking, would point to implication of the cerebellum. Still we have the hemiplegia to account for, which may be due to syphilitic deposit in the left corpus striatum or optic thalamus, or to that progressive softening of these great central commissures which we find attendant on syphilitic disease of the brain.

These syphilitic gummy tumours occupy various parts of the brain; they are sometimes isolated and surrounded by a fibrous zone or capsule, in other cases they are grouped together. They vary in size from a pea to a plum; their colour is usually whitish or yellowish, sometimes pinkish, their consistence firm in some cases, soft and cheesy in others; they occupy principally the periphery of the encephalon, but I have seen them in the various parts of the brain I have already mentioned.

Gentlemen, I have no hesitation in saying that this case is one of surpassing interest, and would entail a range of clinical medicine and pathology which it would be quite out of my power to place before you within the compass of one Clinical Lecture. I have pointed out to you, as far as time has permitted, the more salient symptoms and physical signs present, and now we must proceed to say a few words about the treatment.

I believe there can be a good deal done by treatment for this girl; though she may have a repetition of the convulsive fit. If she had had a mere passing convulsion, which had passed off and left no paralysis behind, it would vary our treatment to a certain extent. At present she is on the mercurial treatment, and gets 5 grains of Plummer's pill, and 8 grain doses each of iodide of potassium and bromide of potassium, three times daily. The reason I put her on the mercurial treatment, when there is so much said about the treatment of tertiary syphilis by iodide of potassium alone, is this:—I believe that in this case unmistakable syphiloma exists about the base of the brain. I believe that syphilitic deposit, up to a certain point, will give rise to a kind of surrounding effusion, an exudation which takes place from the presence of this gummatous matter; this effusion, in most cases, iodide of potassium will resolve; but I believe we have no treatment whatever for dispersing these true gummata but mercury. I give you your choice of three or four preparations, as I think it is immaterial which you exhibit. To a young woman like this you may give small doses of calomel and

Plummer's pill, or the green iodide of mercury. In other cases mercury may be given in the form of the red iodide in doses of $\frac{1}{16}$ of a grain with Bark. In this case we combined the iodide of potassium and bromide of potassium, because epileptiform seizures have occurred. If this had been a case unattended with convulsions, we might strike out the bromide; still I am inclined to attribute some antisyphilitic properties to this salt.

Progress of the Medical Sciences.

REPORT IN MEDICINE.

By ARTHUR WYNNE FOOT, M.D.,
Junior Physician, Meath Hospital.

BENEDIKT, Professor in the University of Vienna, in an *Introduction to the Pathology of the Nervous System and to Electro-therapeutics*, lays down the following diagnostic laws of the localisation of chronic diseases of the nervous system.

1. Paraplegia, occurring simultaneously and symmetrically, indicates disease of the anterior half of the spinal cord. Paraplegia of the legs usually indicates disease at the lumbar enlargement; paralysis of the arms, disease at the cervical enlargement of the cord. The initial symptoms of paraplegia from disease of the spinal column, usually indicate an affection of the roots of the nerves, and these are almost always at first unilateral, *e.g.*, unilateral ischialgic pains in disease of the dorsal and lumbar vertebræ; intercostal neuralgia in disease of the dorsal vertebræ; cervico-brachial neuralgia in disease of the cervical vertebræ. Further, the unilateral development of progressive muscular atrophy may have its origin in disease of the lower cervical and upper dorsal vertebræ; the symptoms become bilateral at a later period, but it must not be forgotten that the spinal symptoms in spondylitis (inflammation of the vertebræ) are not in proportion to the pressure of the distorted vertebræ, but may arise from myelitis.

2. Cerebral paraplegia is evidently composed of two separate hemiplegiæ.

3. Characteristic symptoms of tabes indicate disease of the posterior half of the spinal cord. Spinal contractions and spinal epilepsy are connected with disease or implication of the lateral columns.

4. Progressive muscular atrophy indicates disease of the grey substance of the spinal cord in the neighbourhood of the central canal, or in any case, diffuse disease of the anterior roots; and the same is indicated by the supervention of muscular atrophy on an aggregate of spinal symptoms. I will discuss the symptoms of disease within the cord more at length in a special chapter. I will then endeavour to show that the modern doctrine, that progressive muscular atrophy is a primary myositis is clinically untenable; and I hope also to prove that not the great motor cells, but other cells of the grey substance, must have an influence on nutrition.

5. Hemiplegia, with cross hemianæsthesia, indicates disease of one lateral half of the cord. From the analogy of hyperæsthesia after section of the sympathetic in the neck, it is beyond doubt that hyperæsthesia of the same side in unilateral disease of the spinal cord arises from destruction and paralysis of the vaso-motor nerves.

6. Bilateral neuralgia, with wasting of the arms or legs, indicates disease of the posterior roots, and of their extension into the posterior columns, especially the inner radiating fibres (Charcot). (It is almost superfluous to point out that neuralgia of the limbs on the same side indicates an affection of the brain).

7. Progressive paralysis of the cerebral nerves indicates more or less diffuse disease of the nuclei of these nerves, or diffuse disease of the peripheral nerves of these nuclei, principally from chronic basilar meningitis.

8. Paraplegia of the tongue (alalia), and of deglutition, indicate disease at the level of the hypo-glossal and glosso-pharyngeal nuclei. This fact is especially important with regard to the localisation of disorder of speech in mental disease; and since I pointed it out in 1871, it has been established by Lubimoff. The facial paralysis, usually unequal on the two sides, occurring often along with complicated cerebral symptoms, is to be attributed to simultaneous disease of both nuclei of the facial nerves.

9. Hemiplegia with cross facial or oculo-motor paralysis, indicates disease of the pyramidal fibres at the height of the nuclei, or at the points of exit of the nerves in question.

10. Hemiplegia with hemianæsthesia on the same side, indicates disease of the fibres of the pyramids at the point in the medulla oblongata, where the stimulation of the sensory fibres is completed, up to and including the radiation of the outermost bundle from the pes of the crus cerebri to the medullary masses of the hemispheres behind the lenticular ganglion. According to Türck's researches, however, it is a question whether the limitation of this region can be made so exactly as has been done by Meynert. Charcot, at least, holds to Türck's view.

11. Hemiplegia with incomplete paralysis of the facial nerve (the upper branches remaining free), indicates disease of the central motor ganglia of the brain. As I have seen complete paralysis of the facial nerve in cross paralysis of the oculo-motor and of the extremities, it is evident that the fibres for the upper facial branches separate from those of the lower branches, and the pyramidal fibres above the nucleus of the oculo-motor nerve, and radiate separately into the central ganglia. Further, electric investigation in cases of paralysis leads to different conclusions as to the localisation of the disease within the cranium. A fall of the electro-muscular contractility indicates that the disease is outside the central ganglia; if, on the contrary, it remain intact when the disease is of long duration, it indicates disease within the ganglia.

12. Hemiplegia with convulsions, indicates disease to the central side of the central ganglia, in the fibres of the corona radiata, or in the hemisphere itself. Paralysis not proceeded by convulsions arises from disease of the hemispheres.

13. Aphasia associatoria, *i.e.* disturbance of speech, with complete or relative retention of the movability of the tongue, and of the power to attempt speech, indicates disease of the region of the claustrum, which, according to Betz, represents a ganglion of the hypo-glossal nerve at its posterior part.

14. Hemiplegia with convulsions and aphasia associatoria indicates disease of the frontal lobes, near the convolutions of the island of Reil.

15. Hemiplegia with convulsions and bilateral neuro-retinitis denotes disease of the parts of the hemispheres above the optic thalami, and in any case above the corpora quadrigemina.

16. Cerebral convulsions without paralytic complications are to be referred to the posterior lobes.

Psychical symptoms always denote primary or secondary disease of the cerebral hemispheres, or of the cortical substance. Motor and psychical disturbance and mania are especially to be localised in the anterior half of the brain; disturbance of the emotions in the posterior part (Schroeder van der Kolk). This is true only of purely psychical symptoms. Most of the symptoms of paralytic dementia are, as we shall presently see, to be localised elsewhere.

18. Statical vertigo (the drawing to one side) is a

cerebellar symptom in the wider sense—*i.e.*, of disease of the cerebellum and its extension into the cerebral peduncles.

19. Motor symptoms of irritation in diseases of the central nervous system are not self-evident indications of disturbance of the motor-nervous system, in Bell's sense, but are eventually connected with the co-operation of organs in juxtaposition (the posterior and lateral columns, the cerebellum in the most extended sense of the word, the cerebral hemispheres, etc.) Of tetanus, special forms of contraction and epilepsy, static and cerebral convulsions, this is undoubtedly true; and even the peripheral forms of spasm (*e.g.* convulsive tic) may be shown to have an excito-motor starting point. In all forms of spasms we see, however, that they are essentially connected with the stimulation of the organ of volition, or with irritation conveyed through the spinal cord to the periphery. Spinal epilepsy also, as it occurs in paralysis agitans, or in diffuse sclerosis of the central nervous system, and in purely spinal symptoms (as an expression of sclerosis of the lateral columns), is under the influence, on the one hand, of irritation of the voluntary fibres, and on the other, of reflex spinal irritation. A localization of symptomatic spinal epilepsy as a unity would be impracticable. We will return to the probable localization of paralysis agitans in a spinal section. As a general fact, the following may be stated:—

20. The influence of irritation of the sensorium on a phenomenon of motor irritation, and on a pathological motor phenomenon, does not generally prove that this symptom must be of cerebral nature; and motor symptoms of irritation indicated as central are essentially conditional on irritation, or at least co-operation of the sensitive and sensorial parts of the nervous system. It is generally to be observed that a large group of motor disturbances are not the result of disease of the motor parts (of Bell), but of disease of laterally contiguous parts of the nervous system having motor influence.(1)

In the IRISH HOSPITAL GAZETTE, 15th August, 1874, Dr. C. Ewald, of Berlin, communicated the particulars of a case in which inflammable gas—carburetted hydrogen—was formed in the human stomach. Dr. A. Heynsius(2) relates a case of a similar kind. Dr. Heynsius was some time ago informed by one of his friends that an acquaintance of his from time to time caught fire. He said that the patient suffered from violent eructation after eating, and that gas was thereby discharged, which caught fire when a flame was brought near, as in lighting a cigar. This had taken place four times; on two occasions it produced rather severe burns, once of the mouth and lips, and another time, when the gas was mostly discharged through the nostrils, of the nose. On seeing the patient, Dr. Heynsius found him to be a tolerably well-nourished man, aged 35, a clerk by occupation. He stated that for ten or twelve years he had been much troubled with pain in the stomach. The pain was constant, sometimes more, sometimes less severe; and was not relieved by any medicines. Vomiting first occurred five years previously; in 1872 it was very severe, and was accompanied with violent pain in the back and both sides. At that time the stomach was several times washed out with the stomach-pump; but this rather increased than relieved the symptoms. Since that time the vomiting had occurred sometimes twice a day, sometimes scarcely twice a week. The vomited matter was always of a very sour taste, never bitter; it was frequently found to contain food which had been eaten some days previously. He had never seen blood in it. Along with this, he was constantly troubled with a sense of distension in the gastric region, and with violent and offensive eructation. Four years ago, he had just lighted a cigar, when a discharge of gas from his mouth took place, and caught fire. The flame gave little light; it was about as large as the palms of two hands, and the burning was attended with a distinct, though not loud, explosive report. This subsequently happened three times. He had since avoided being very near a flame; when he smoked his wife lighted his cigar for him. He was of middle height and well-formed. The belly was protruded, especially on the left. The lower ribs on the left side were pushed forwards and outwards. On careful inspection, a bulging was observed extending from the lower part of the left side of the chest downwards and to the right as far as the umbilicus, ending about four-fifths of an inch to the right of the linea alba. The whole abdomen was tympanitic on percussion; on the left side, however, the intestinal percussion sound could be plainly distinguished from the fuller stomach-sound, which began between the fifth and sixth left ribs, and extended downwards to about an inch and a half below, and about two and a half inches to the left of the navel. The liver dulness began in the nipple line, at the sixth rib. On succussion a splashing sound was heard in the abdomen. There was no trace of tumour. The patient still vomited frequently. He had no pain in the stomach, but an uncomfortable sense of distension after eating, which was relieved by vomiting or eructation. Meat or milk were ill borne, beef worse than pork; fish, bread, eggs, and buttermilk were much better tolerated; the use of butter appeared to give no trouble.

The case was evidently one of considerable dilatation of the stomach, probably the result of a stricture of the pylorus. That the obstruction was lower down was improbable, as the vomited matter never contained bile, and it was evident that the bile had a free passage downwards, as the fæces were always coloured. No decision could be arrived at with certainty as to the cause of the constriction. Attempts to collect the gas discharged by eructation failed. The patient, who still attended to his business, was at home only a few hours in the day. The chief difficulty, however, was that eructation generally took place very quickly, so that he had not time to apply the tube for collecting it to his mouth. Dr. Heynsius was, therefore, obliged to content himself with an examination of the vomited matter. The reaction was very acid, and, on standing, a separation into three layers took place. The uppermost layer consisted of thick froth in which the remains of the meal were recognized. The middle layer consisted of a semi-transparent, yellow fluid. The lowest consisted of a grey granular mass, also containing *débris* of food. Microscopic examination discovered the remains of food (fat-chops, muscular fibres, vegetable cells, starch granules); as well as an abundance of *sarcina ventriculi*, and a not very great amount of *torula cerevisiæ*. An examination of the vomited matter was made four hours after its ejection. In the meantime (it was warm weather) the process of fermentation had gone on, and the gas developed had driven the stopper out of the bottle. The vomited matter was raised to a temperature of 95° Fahr., and the gas was collected over mercury. That which first came over contained in 100 volumes, 78 of carbonic acid, and 19·2 of hydrogen; while in some subsequently collected the quantities were, carbonic acid 85·5, hydrogen 13·9. No marsh gas could be found. The greater amount of hydrogen in the gas first collected rendered it probable that a still greater proportion of this gas would have been found, if it had been possible to make the examination immediately after vomiting took place. In the distillate from the vomited matter, butyric acid was found. There could be no doubt that the phenomenon described in this case depended essentially on butyric acid fermentation, and that the hydrogen thereby developed was the cause of the inflammability of the ejected gas. The development of hydrogen probably takes place to a greater or

(1) *Lond. Med. Record*, 25th Feb., 1874.
(2) *Ibid.* 2nd Dec., 1874.

less degree in various affections of the stomach. In the treatment temporary relief only was obtained by washing out the stomach with the stomach-pump. Creosote, carbolic acid, quinine, and hypermanganate of soda had little or no effect in arresting the process of fermentation. On the other hand, improvement was obtained by the use of chlorinated water.(1)

In a paper "On the Formation of Inflammable Gases in the Stomach," Dr. Friedrich Schultze, Assistant Physician to the Medical Clinic in Heidelberg, has collected several cases similar to the above.(2)

In a lecture upon General Therapeutics of the Nervous System *(New York Med. Record*, July 1, 1874,) Dr. E. C. Seguin, under the head of spinal depressants, says that conium is the type medicine of this class, and seems to be the direct antagonistic of strychnia. It acts by paralysing the spinal motor centres, from the nucleus of the third nerve downwards. This remedy can be used with benefit in spasmodic affections. In small doses it produces a paretic affection of the axis, indicated by partial ptosis, strabismus, or double vision, and weakness of the knees; and the arms may become slightly paretic. The symptoms appear within an hour after the medicine has been taken. By the administration of larger doses almost complete akinesis is obtained, which may last for half an hour or an hour, but is not dangerous. The remedy should be given only once a day, and, in many cases, to the extent of partially paralysing the patient. A reliable preparation is the English *succus conii*, which may be administered in doses of from ℥ij to ℥vj once a day. In epilepsy I have employed the fluid extract (Squibbs) of conium in combination with bromide of potassium, with good results.

Bromide of potassium also acts directly upon the spinal cord as a depressant. It lowers the activity of the motor tract (though in a lesser degree than conium) and diminishes reflex excitability. Its use is consequently indicated in all affections in which reflex action is abnormally great, and in many such we obtain immediate and permanent good results from its administration. In various forms of convulsions, the eclamptic attacks of children, of pregnant and parturient women, bromide of potassium does good. Morbid excitement of the lumbar part of the spinal cord, as evidenced by nymphomania and satyriasis, is often relieved by this drug. Some forms of vomiting (in pregnancy, after inhalation of ether, etc.), spasmodic states of various sphincters are also to be cured by bromide of potassium. It is in the treatment of the great neurosis, epilepsy, that this medicine is most employed, and it is concerning its usefulness in this affection that great discussions have occurred. The use of bromide of potassium in epilepsy was begun by several physicians about the same time, but Drs. Brown-Séquard and Laycock were the first to call attention to it. The generally received opinion is that bromide of potassium is the medicine which possesses more power than any other over epilepsy; that in the majority of cases the frequency and severity of the seizures are very much diminished while the medicine is being taken (the symptoms soon reappearing if it be discontinued); and that a case here and there may be cured by its use. In Hospitals with large numbers of epileptic patients, the effects of giving and withholding bromide of potassium are very strikingly in favour of the utility of the drug. There are a few general rules to be observed in the treatment of epilepsy by bromide of potassium. In the first place, enough bromide of potassium (and other bromides if you please) should be given to reduce the reflex function, and keep it below the normal standard. A test of the sufficient action of the medicine lies in the reaction of the palate and fauces to irritation; a diminution or abolition of the well-known reflex movements of these parts indicating diminution of the reflex excitability. Another general rule is to give more of the medicine at night than in the daytime; a direction of great value, for which we are indebted to Dr. Brown-Séquard. We usually give three day doses, and a dose in the evening twice or thrice the size of the day dose. A third and most important rule is to administer the bromide of potassium in a perfectly continuous way for months and years. Dr. Brown-Séquard has known patients, who remained without seizures for two years, while taking his prescription for mixed bromides, to have a return of convulsive seizures in a short time after ceasing the medication. There are few epileptics who cannot tolerate the bromides, who become easily "bromised," and whose attacks are made worse by these drugs. While recognizing the great value of Brown-Séquard's compound bromide solution (bromides of potassium and ammonium, and iodide of potassium) Dr. Seguin more commonly employs a simple solution of bromide of potassium, giving gr. v three times a day, and gr. xv or xx at bedtime, at first in adults. Children require relatively large doses of the bromides, and contrary to what is generally taught, he sees in anæmia no contra-indication to the use of the remedy, nor does he believe that any law can be laid down for the giving or not giving of it, from observations upon the retinal circulation. Such a view is based only upon belief in the more than doubtful physiological theory, that cerebral hyperæmia and anæmia are usually prime factors in the pathological state called epileptic.

Under the head of Tonics and Restoratives, Dr. Seguin discusses the medicines calculated to promote the repair of the nervous system. By restoratives he understands those remedies which restore to the system an element diminished by a disease, or whose diminution causes a disease; two of this class are especially useful in diseases of the nervous system—phosphorus and fats. He is unwilling to admit that there is any defined morbid state of the nervous system which can be shown to depend upon a diminution of the phosphorus, which is so important an ingredient of nerve tissue; yet he is willing to admit that in some nervous diseases much phosphorus is excreted, and that in very many of them much benefit, even to a cure, is obtained by giving phosphorus. In practice, the various phosphates, the acid phosphates, the hypophosphites, etc., if they do good, do so very slowly, and are hardly to be used in the treatment of serious cases, except as adjuvants. Phosphorus itself may be administered in the form of the officinal oil, and as phosphide of zinc. The dose of phosphorus ranges from grain $\frac{1}{60}$ to $\frac{1}{12}$, that of zinc phosphide from grain $\frac{1}{4}$ to $\frac{1}{2}$. In administering this powerful remedy, it is to be borne in mind that some organisations are very susceptible to its tonic influence. In cerebral mal-nutrition, in neuralgia, in spinal irritation, in hysteria, and in varieties of paralysis, this drug is of the highest value. Fatty food and cod-liver oil are indicated in the conditions which demand phosphorus. Among the tonics the chief are strychnia, arsenic, zinc, iron, quinia, and cold. Cold should, for its tonic effect, be applied only for a short period of time. This may be done by sponging, the shower-bath, cold compresses, the cold sheet, and sea-bathing. A corresponding reaction follows, which consists in hyperæmia and improved nutrition. Strychnia in cases of irritability, of hysteria, spinal irritation, and in some palsies, may be given in small doses for long periods of time; doses of grain $\frac{1}{60}$ or grain $\frac{1}{30}$. The action of arsenic is often marvellous in chorea, and very satisfactory in other nervous diseases. Fowler's solution is the arsenical preparation most commonly employed, and in chorea it should be dealt out with no sparing hand; doses of ♏iv, ♏vj, or ♏x being well borne. The oxide and lactate of zinc have been much used in states of exhaustion of the nervous system, after

(1) *London Med. Record*, 2nd December, 1874.

(2) *London Med. Record*, 12th August, 1874.

sexual excess, or in chronic alcoholism, and in epilepsy. It may be employed in combination with extract of nux vomica. Quinia, in moderate doses, would seem to act as a tonic. It is possible that it does so by causing more food to be taken and digested, yet from the immediate improvement in well-being and in cerebral activity, which many experience while taking it, Dr. Seguin is inclined to the opinion that this remedy does exert a direct effect upon the nervous centres. Iron does not especially affect the nervous system; it improves the condition of the blood, and, by so doing, cures morbid states of the nervous system (neuralgia), which depends upon anæmia or chlorosis.

Reviews.

Outlines of the Science and Practice of Medicine. By WILLIAM AITKEN, M.D., F.R.S., Professor of Pathology in the Army Medical School, Etc., Etc. London: Charles Griffin and Co., 1874: pp. 593.

THAT the excellence of Dr. Aitken's *Science and Practice of Medicine* as an encyclopediac text-book is generally acknowledged, the rapidity with which the six editions of it have been demanded clearly show. We think, however, that the distinguished Netley Professor has exhibited his undoubted good sense and proverbial native canniness, in likewise publishing the work which forms the subject of our present notice; for we confess that the last edition of "Aitken" in two huge volumes of 2,300 pages, tends from its size alone to alarm the student, as well as those who, like the Military or Naval Medical Officer, in consequence of being frequently obliged to travel, are compelled by stern baggage regulations or other considerations, to limit even the size and number of their books.

The Outlines of the Science and Practice of Medicine is a clear and concise digest of the author's larger work, to which it is designed to serve as an introduction. Those who are acquainted with the methodical arrangement of Dr. Aitken's *magnum opus*, will not fail to have perceived that it was one which admitted of judicious condensation. "The Outlines," however, does not consist in a mere epitome of these volumes, but is a careful compilation by a master-hand of what is "solid, practical, and essential" for a student of medicine to learn, as well as an admirable exposition of the way in which he should acquire and record his knowledge.

We feel sure that Dr. Aitken's handy and portable little book, will prove as acceptable and useful to the student, for whose use the author states it is expressly intended, as to those medical men who, removed perhaps from any other means of obtaining information, may require an easily accessible, authoritative, and trustworthy guide to aid them in the prevention, recognition and treatment of disease.

A Manual of Hygiene, Public and Private, and Compendium of Sanitary Laws. By CHARLES A. CAMERON, M.D., Etc., Etc. Dublin: Hodges, Foster and Co. 1874: pp. 475.

PROFESSOR CAMERON is so well known throughout Ireland in his official capacity as a Public Analyst, and as an active worker in the cause of Sanitary Reform, that anything from his pen on the subject of hygiene, will, we are sure, meet with a favourable reception from both professional and non-professional readers.

In addition to the excellent half-yearly reports on Public Health which he writes for the *Dublin Journal of Medical Science*, Professor Cameron published in 1868, at the request of the Municipal Corporation of Dublin, *Lectures on the Preservation of Health*, being the first course of lectures he delivered from his chair of Hygiene in the Royal College of Surgeons, Ireland, and in 1871 a popular *Handy-Book on Food and Diet*. His *Manual of Hygiene* consists mainly of a systematically arranged selection from these publications, supplemented by a collection of Sanitary Statutes, with notes thereon, and a full index. Although it contains, therefore, but little novel, or what has not been previously published, Professor Cameron has, we believe, done a useful and opportune work in compiling a volume, at once popular and scientific, which cannot fail to be equally of service to those of the general public who may desire to become somewhat conversant with the outlines of Sanitary Science, as well as to the newly-constituted Medical Officers of Health; especially in showing the latter the legal powers under which they may act in particular cases, and in indicating the best means of investigating and removing any Sanitary defects they may be called upon to suppress.

The Present State of the Army Medical Service as a Life Career for the Surgeon. By EDWARD HAMILTON, M.D., Dubl., Vice-President R.C.S.I., Etc., Etc. Dublin: Fannin and Co. 1875: pp. 48.

THE Vice-President of the Royal College of Surgeons in Ireland, having collected a large number of facts bearing on the alleged grievances of the Army Medical Officers, and having come to the conclusion that their complaints were well founded and just, has just issued the above pamphlet. The Medical Officers of the Army have good reason to be grateful to him for the great trouble he has taken in its preparation, the careful study he has made of the whole subject, and the very able manner in which he has explained the real state of affairs.

The slow promotion of the junior Medical Officer; the poor prospects of all; the difficulty of obtaining leave; the injustice of the forage withdrawal; the inconsiderate moving of the Officers (as if they were commercial travellers), and several other points of deep interest to those concerned are dwelt upon, and in some cases exhaustively worked out.

From page 13 we cannot help quoting an argument for the maintenance of an effective Medical staff, which ought to arouse the tax-payer. Dr. Hamilton calculates that if, through the indifference or inability of the Medical Officers, the invaliding of the soldier is increased only *one per thousand* per annum, it would be at a cost to the country of about £50,000. It appears to us, that if the cost was but £10,000, that the extravagance of a discontented Medical staff would be obvious, and demonstrated.

On the subject of pay, it is very conclusively shown that the emoluments and rewards of the combatants and others are far ahead of those of the Medical Officer: various tables of relative rank, etc., settle this question. Dr. Hamilton shows that, excluding brigade commands, rich prizes in India, distinguished service rewards, etc., there are 1,354 lucrative appointments of the aggregate value of £350,127 open to combatants, whilst no such appointments fall to the lot of the surgeons. A dozen half-pay appointments of small value are all they have to look forward to.

In connection with the subject of decorations, we think the author should have mentioned that a much larger proportion of Medical Officers have war services recorded against their names than the combatants of regiments.

In conclusion, the author deals with Dr. de Chaumont's late paper on the Financial position of the Army Medical Officer, past and present, and shows very simply and intelligibly that any idea of the Medical Officer being better off now than formerly is a very mistaken one. Dr. de Chaumont appears, however, to have been strangely misunderstood; but as he fully explains himself in a letter to Dr. Hamilton which we

publish in another column, we have only to say that it is most unfortunate that what we believe to be a simple *bona fide* statement of facts, should have been so misconstrued in its application.

We strongly commend Dr. Hamilton's pamphlet not only to the notice of the Army Medical Officers, but to the whole body of civil practitioners, who may rest assured that any injury inflicted on their brethren of the services, will sooner or later injure the whole profession. "The honour of one is the honour of all, the disgrace of one is the disgrace of all." In Dr. Edward Hamilton, the Medical Officer of the Army, and, we may add, the sick soldier, have found an undaunted and a disinterested champion, whose powerful advocacy, from the author's high professional position and character, can scarcely fail to have influence for good.

Correspondence.

LONDON.

FROM OUR OWN CORRESPONDENT.

Epileptic Aura of Colour and Smell—Chorea and Heart Disease—Double Optic Neuritis—Infantile Paralysis—Treatment of Glandular Swellings of the Neck by the Injection of Acetic Acid.

At a recent visit to the Epileptic Hospital, Queen's Square, Dr. Hughlings Jackson made some remarks on the subject of epileptic "aura," especially in reference to "aura" of colour and smell. A boy of twelve years of age came who gave a very intelligent account of an aura, or first symptom of an epileptic seizure. It was a development of colour, and the colour was red. The fit, as far as was ascertainable from his and his father's account, was otherwise like what is commonly called genuine epilepsy. The boy said that his head turned to the right before the fit, although the "aura" appeared on the left, the rule being that the "aura" occurs on the side to which the head turns. In progressive atrophy of the optic nerve there is a gradual loss of colour-perception, and red is the colour first lost. Dr. Hughlings Jackson believes that red is usually the colour *first developed* in cases of epilepsy where colour development is a warning of the seizure: it is not always so, but the rule. Dr. Jackson is unable at present to refer colour aura to any particular form of epilepsy. They occur in unilateral fits, and apart from epilepsy in some cases of migraine.

Cases of epilepsy where there are colour "aura," are the analogues of those which begin by "subjective" sensations; for example, of smell; these may occur in persons who have no true sense of smell. Dr. Jackson would call an aura of smell "a sensation of smell subjectively initiated."

At the same visit Dr. Gowers, one of the Assistant Physicians, in speaking of a case of chorea in a girl of nine, who had a loud systolic murmur at the apex of the heart, heard also below the left scapula, pointed out that it is a curious fact, that while cases of chorea, which are seen at general Hospitals, as a rule, show no sign of organic heart disease, the cases which come to the Epileptic Hospital, on the contrary, generally do. It may be that the chorea patients at general Hospitals have the disease less severely, and come earlier under notice than those which seek aid from the special institution. Here there was no history of rheumatism, and it was a first attack and followed a fright. He finds the use of liquor strychniæ very valuable in chorea, and prefers it to Fowler's solution of arsenic. For the above case ℥iv were ordered twice a day.

Dr. Gowers showed us a very interesting case of optic neuritis in a woman of 35, which shows the necessity and importance of examining the optic discs in all cases of obscure nervous symptoms. The patient has, ever since the birth of her last child, four years ago, suffered from severe headaches, and more or less sickness. She may be free from pain a day or two at a time, or as much as a week, but never longer, and she only suffers in the day time, when she is up, and gets relief almost immediately when she goes to bed. The pain involves the brow and crown of the head. She has had no fits, and her appetite is fair, but she is not "regular." The symptoms, therefore, are only at first sight such as might be due to some uterine disease; and the pain, from its long duration, and the utter absence of organic symptoms, might be, and would until lately have been considered as purely functional. On examination of her eyes, however, both optic discs are absolutely blurred, and their outline concealed under a reddish, striated swelling, in which the vessels are partly lost. She has, in fact, undoubted optic neuritis, a condition which, as far as we know at present, is always accompanied by some intra-cranial organic mischief, and it is therefore probable that her symptoms are to be referred to the pressure of some slowly-growing tumour.

In spite of her neuritis—and this is a most remarkable fact—she can read 1½ Snellen with perfect ease; she can distinguish all colours with accuracy, and the field of vision is unrestricted.

A case of infantile paralysis, at present under Dr. Gowers, is interesting for the extreme suddenness with which the disease first set in. The child, aged 2 years, was walking in the street, when it suddenly fell down on its knees, and from that moment lost all power of standing for the rest of the day. On the next day it could just move its legs, and in a fortnight power had returned to a considerable extent in both, but the left leg has since recovered more slowly than the right.

Dr. Gowers believes that it may be considered an axiom in nerve pathology that the instantaneous onset of a paralysis, due to an organic cause, means a vascular lesion, that is a hæmorrhage, embolism, or thrombosis. As no cause for embolism can be found in the above case, we must assume that there either was rupture of a small vessel in the cord, or else a thrombosis occurred.

At the Hospital for Diseases of the Throat, Golden Square, Dr. Morell Mackenzie is now treating enlarged and indolent glands about the neck, especially in adults, with injections of the dilute acetic acid of the British Pharmacopœia. Seven minims is the quantity injected the first time, and ten minims or more may be used if several injections are necessary. They are made with an ordinary hypodermic syringe. Two results may follow the injection. Either the gland suppurates and the matter is let out as in an ordinary abscess, or else it disappears gradually by interstitial absorption, without any suppuration whatever. It is impossible to say beforehand whether suppuration will occur. In some patients one injection will excite suppuration. In others in whom it occurs several are required.

The above method seems to be a really valuable one. By its means unsightly lumps, which formerly were treated for months by iodine paint and internal remedies with indifferent success, can now be removed in a few weeks with only a trifling annoyance to the patient, and, at the most, with a slight scar.

THE EMOLUMENTS OF ARMY MEDICAL OFFICERS.

WOOLSTON LAWN, NEAR SOUTHAMPTON,
December 24th, 1874.

TO THE EDITOR OF THE IRISH HOSPITAL GAZETTE.

SIR—I shall feel greatly obliged if you will publish in the GAZETTE the accompanying letter to Dr. EDWD.

HAMILTON, and so give it the advantage of your wide circulation.

I am, Sir,
Your obedient Servant,
F. DE CHAUMONT, M.D.,
Surgeon Major,
Army Medical Department.

WOOLSTON LAWN, NEAR SOUTHAMPTON,
December 24th, 1874.

DEAR SIR—I received, on the 21st of this month, a copy of your pamphlet, on "The present state of the Army Medical Service as a life career for the Surgeon," and I beg to thank you for your courtesy in sending it to me. I am glad to hail you as a well-wisher to the Department, and hope that your efforts in its behalf will be successful. With much that you have written I cordially agree, although on some points I am inclined to differ, particularly in your depreciation of the staff, or so-called *unified*, system in comparison with the regimental. I believe the unified system, *properly* carried out, to be the best, but it has not yet had a fair trial in the form which its supporters desired, for the present combines many of the faults and drawbacks of both systems. The Warrant of 1873, although it professed to introduce the staff system, was one of the most disappointing documents ever issued, and many officers have good reason to complain of the way in which it was made to affect them. I do not, however, intend to trouble you with detailed criticisms upon the body of your paper, but I must ask leave to say a few words with reference to its closing pages, in which you criticise my paper in the *Edinburgh Medical Journal* of last month. Already two letters have appeared in the *British Medical Journal* in much the same tenor, and to those I briefly replied in the number of the 12th current. The personal attacks made upon me and the gross misrepresentations of my statements were of comparatively small moment, as the letters were anonymous; but, when a similar attack is made in a special publication under the name of a gentleman of your standing as a medical man, and a teacher in an important school, I feel it demands more notice at my hands. My object in publishing the paper was the same as yours, namely, to assist in promoting the welfare of the Department and improving its position—certainly with no intention or expectation of attracting a single individual into it. Throughout my service my efforts have been in the same direction, and I now with astonishment and disappointment find myself stigmatized as a "retained advocate" for a condition of things of which I strongly disapprove, and which I consider quite unworthy of the high position the Officers of the Department ought to hold. But the truth is, that I cannot acquit my critics, yourself among the number, of singular carelessness in reading my paper, and of an apparent inability to understand a few figures. You have throughout misrepresented me (even to the spelling of my name!); you have put words into my mouth that I never uttered; and you have attached meanings to my real words that they will not bear. You have, in fact, been conjuring up giants out of your own imagination for the purpose of knocking them down again, and have credited me with their creation, adding, by implication, at least, personal imputations of venality, such as have been put in grosser and more offensive form by my anonymous assailants. The whole question turns upon the assertion that I state in my paper that the Medical Officer of the present time is forty-three per cent. *better off* than he was in 1804. Would you kindly point out the part of the paper in which that statement occurs? I have used the expressions "apparent gain" and "nominal gain," the meaning of which I should have thought sufficiently clear. So far from my saying that the Medical Officer of the present day is *better off*, it was my object to supply accurate *data* for showing how insignificant had been the increase in the long period of 70 years. I was careful to give my reasons for assuming the starting-points. I took and purposely gave the *utmost* that a Medical Officer could get, to show the outside limit of his probabilities, desiring it to be understood that his chances lay rather *within* than without the sums and conditions named. As regards the age of entry I have distinctly stated that I adopted 22 years as a "favourable" estimate, by which I meant and intended to convey that this was the earliest time that men usually entered. With regard to the probability of life, which you accuse me of misrepresenting, I must retort the accusation upon yourself; although I showed that the average of the last 30 years show a death-rate of 30 per thousand, yet as the *last* 10 *years* show only 20 (which I pointed out), I thought it but fair to take this as nearer the present truth, the death-rate of other officers being taken for the same period. Even with 20 per 1,000 the expectation of life is shown to be 20 years less than that of the civil medical practitioner, but I deducted only 10 years (taking 37 as the expectation) in order that I might be well within the limits of error. But in the table of death-rate at p. 45 of your pamphlet you have omitted to point out that 20 per 1,000 has been the death-rate of the last 10 years, and so make it appear that I had invented the rate for my own purposes. As regards pay and allowances I was particular to point out that the sums given were on the supposition that the officer *always* enjoyed them without deduction, and that he *always* got lodging-money when living out of quarters, but that in *fact* this was not so, so that the calculation put the conditions in the most favourable light. I again recur to this point when enumerating the disadvantages of the service. You cannot suppose that I am ignorant of the expenses of living, or that I have not personal experience of the dockings and cuttings to which officers are exposed, but it was no part of the purpose of my paper to lay down an average way of living, and compare it with the pay—each man must do that for himself.

You say with regard to pension that I have stated that the Medical Officer gets £1 a day at twenty-five years' service, and proceed to demonstrate that he only gets 18/10 or $\frac{7}{9}$ths of 27/0. You will find that I have done that myself in a note on the sixth page of the paper, where, by-the-by, a printer's error has put "of age" instead of "service." I distinctly stated that I had neglected the difference in the calculation, and that it made but a small change in the values I educed; but it was, after all, not without reason that I assumed the full £1 per diem, for the majority of officers who do retire at twenty-five years' service, do so with the certificate of a medical board, few men at that time being sound of wind and limb after a life spent in the service. You are, however, in error in supposing that a medical officer retires on $\frac{7}{9}$ths of 24/0, or 16/10 at *twenty-five years' service;* if he retires before *completing* twenty-five years' service he only gets the half of 24/0, or 12/0, unless he is sick, and then he gets 16/6; but the day after he completes his twenty-fifth year he may go on 18/10.

With regard to the rate of interest I have adopted, I conceive I had no choice; the Government (very unfairly) calculates our commutation of pensions at five per cent., while they are borrowing at a trifle over three; but that being the case I considered it only right to calculate the annuities at the same rate. I might have calculated commutation and annuities at three per cent., but the result would have differed only in this, that it would have been even more favourable at three per cent. than at five, except in the perpetual annuities. Thus, for thirty years' service we have the following comparison:—

	At 5 per Cent.	At 3 per Cent.	Difference in favour of 5 per Cent.	3 per Cent.
Commutation or present value of emoluments, pension, and chances of promotion, at entry into service.....	£5,949	£8,644	—	.... £2,695
Annuities purchasable for the above sums]				
For 30 years.....	£388	£441	—	.... £53
For 37 years or life.....	£356	£391	—	.... £35
Perpetual.....	£297	£259	£38	.... —

But I think I can further show that my calculations are not far from the truth, and are even less than those you have yourself adopted; at pages twenty-six and twenty-seven of your paper you calculate the average pay of a medical officer for twenty-five years at £7,436 17s. 6d., divided by twenty-five, and by knocking off the odd hundreds to cover compulsory expenses, you show that he can only have an average of £280. By my calculation the result, with allowances which you omit, comes to £340, and deducting the average of the allowances I have credited him with, viz., £79, we have £261, or £19 under your amended estimate, whereas mine is without deduction. On the other hand, in the final estimate of the value of the commission, at the tenth page of my paper, I have deducted £36 a year for thirty years for compulsory expenses, losses, &c., whereas you have only allowed £17 10s. 0d., or a sum of £436 17s. 6d divided over twenty-five years. Even if this latter sum were taken as present value at the commencement of service, it would yield, at five per cent. compound interest, only £31 a year for twenty-five years.

In conclusion, I may say that perhaps, from having to work a good deal with figures, I may have thought that they told their own story more clearly than they appear to have done, but I must add that it has been with astonishment I have found people read my paper and come to any other conclusion than that the Department was most inadequately paid, and had practically retrograded during all this century. I think the small advance of pay—in some cases positive diminution—the low expectation of life, the paltry chances of advancement to the higher grades, and the insufficient pension, ought to have told a tale that they might run who read; and, for myself, I was certainly not so enamoured of the results I brought out as to expect that they would attract one single soul to the Department that would not otherwise have entered it. I should think also that people might have credited me with a little common sense, and not have believed that I wished to saw off the branch on which I myself was sitting, or that I would knowingly obstruct improvements of whose benefits I should be in common with my brother officers, a participator. It was, however, not my intention to produce a rhetorical paper, or to deal with conjectures of my own, as I must have done if I had gone more fully into the relative value of money, &c. My chief desire was to lay a statement of facts before my readers, giving the methods by which I had made my calculations, and leaving the conclusions to be drawn by them. Had I possessed any trustworthy information on the value of money and the relative amount of civil emoluments, I should have been glad to have stated them in the fullest way possible. Not having information I could rely on, I thought it best merely to refer to those points, to show that I was not ignorant of their importance, and had not overlooked them.

Should your pamphlet reach another edition, or should you again write on the subject, I think I have a right to claim that you will rectify the erroneous statements which I have above pointed out. In the meantime I beg to give you notice that I intend to publish this letter in self-defence against your printed statements.

Faithfully yours,

F. DE CHAUMONT.

Dr. EDWARD HAMILTON,
V.P., R.C.S.I., &c.

Extracts from Journals.

JABORANDI.—In connection with M. Rabuteau's observations on this drug (*vide* IRISH HOSPITAL GAZETTE, Vol. II. p. 162), the result of experiments made by Dr. Ringer and Mr. Gould on the effects produced by it, may prove of interest. Four experiments were made on youths between eight and twelve years of age, the dose being 30 grains of the infused drug. In three cases out of the four, copious perspiration followed: in one the skin remained quite dry. There was salivation in all the experiments, and it was unusually profuse in the lad whose skin remained dry. In one case there was slight increase of the bronchial secretion. In each observation a decided fall in the temperature occurred; in one case the fall began immediately, in another case in forty minutes; in another instance in eighty minutes. The drug excited vomiting, with, however, scarcely any nausea, in all the youths. In all instances, the heart's action became heightened, and the pulse accelerated. Slight drowsiness also supervened. It has been asserted that Jaborandi is composed of the leaves and small stems of the *Pilocarpus pinnatifolius*, but the assertion has not been confirmed by the observations of the present writers.—*The Practitioner*, December, 1874.

DOUBLE SPLEEN AND KIDNEYS.—Surgeon-Major G. W. Jameson reports a *post mortem* examination, in which he found a second spleen, weighing nine and a half drachms, situated between the normal spleen and liver; also a second pair of kidneys, small, and situated below the normal anus.—*New York Med. Jour.*, May, 1874.

INDURATED BUBO.—In the practice of the Philadelphia Hospital better results are claimed for the following method of treatment than any other that had been adopted:—Cover the part freely with mercurial ointment, and keep up constant pressure by means of a *hot brick*.—*N. Y. Med. Record.*

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, 12th December, 1874.

ROBERT MCDONNELL, M.D., F.R.S.,
President, in the Chair.

Cardiac Neurosis.

PROF. MOORE exhibited the heart, liver, and kidneys of a woman, aged 40, who was the subject of most violent and distressing cardiac palpitation, with visible pulsation in the vessels of the neck, and exophthalmia, but no thyroid enlargement. This woman was the mother of five children; her menstrual functions had been in abeyance for some time prior to admittance. She was not spanæmic, but there was a history of a mental shock in March last, since which time she had suffered from the above mentioned symptoms. There was a frémissement over the heart and extended per-

cussion-dulness at its left side, but no murmur. The pulse was extremely rapid, 160. Uncontrollable diarrhœa set in, from which the patient died. *Post mortem*—There was no valvular disease, or fatty degeneration of the heart; the left ventricle was slightly hypertrophied. The kidneys and liver were fatty. Prof. Moore remarked that there was no apparent lesion to account for the palpitations and cervical pulsations in this case. He believed, with Dr. Stokes, that the disorder was a nervous one, and referred to the views of those who ascribed the pathology of this disease to changes in the cervical ganglia of the sympathetic nerve, but which he attributed to some lesion of the cardiac hastening nerves, described by Schiff.

Morbid Human Ovum.

Dr. M'Clintock showed an ovum of about two months' growth. Both layers of the decidua were present, and the substance of the ovum was degenerated, thickened, and indurated, and presented a rugous appearance. No trace of an embryo could be found. The chief interest of the specimen was in its clinical history, as in the second month of pregnancy, the incubation was arrested, and all the signs of pregnancy disappeared, although the ovum was not cast off until the seventh month. (*Vide* abstract of Dr. M'Clintock's paper in report of Obstetrical Society, p. 16).

Strangulated Hernia.

Prof. Bennett exhibited the morbid specimens from the case of strangulated hernia, which he published in the Gazette of Dec. 1st, 1874.

Cancer of Uterus and Liver.

Dr. Finny exhibited the above organs, which he had removed from a Dissecting-room subject. The liver presented a good example of Farre's tubercle. The spleen was normal. There were no pulmonary or mediastinal nodules, but the right pleural cavity was full of serum.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, 9th December, 1874.

WILLIAM MOORE, M.D., in the Chair.

Intra-Cranial Tumour.

Dr. C. E. Fitzgerald, who, in June last had read a paper before the Society "On the ophthalmoscopic appearances of the Optic Nerve in cases of Cerebral Tumour," based upon a case in which he had diagnosed the presence of an intra-cranial tumour in the neighbourhood of the pons, in a patient then under his observation, now brought before the Society the brain of this individual, who had died a few days ago. Having recapitulated the life history of the case (*Vide* Irish Hospital Gazette, Vol. II., p. 175), Dr. Fitzgerald exhibited the specimen, which in every way corroborated his diagnosis. At the base of the brain, in the left middle lobe, was a large, hard, nodulated, whitish mass, which was adherent to the left side of the sella turcica. The basilar and left internal carotid arteries contained a large plug, and were adherent to this mass, which also involved the third nerve and the posterior communicating artery. There were two well-marked nodules in the pons varolii, and the optic commissure was converted into a hardened mass. The left frontal lobe and the whole of the left hemisphere was much softer than the right, from the plugging of the left internal carotid artery: the corpus striatum was reduced to a complete pulp. A section of the cerebral hemispheres exposed numerous most marked bloody puncta: the left ventricle was a mass of pulp, but its lining membrane was remarkably thickened. The tumour resembled a syphilitic gumma, but there was no symptom or history of that disease. A *post mortem* examination of the heart was not obtained, but during life its sounds were normal.

The Chairman commented on the interest of Dr. Fitzgerald's communication, and on the value of the ophthalmoscope in the diagnosis of similar cases. He alluded to a case at present under his care, the symptoms of which made him suspect the existence of a syphilitic cranial lesion. (*Vide* Clinical Lecture, p. 6).

Mr. H. R. Swanzy said that he had seen Dr. Fitzgerald's patient during his life, and had confirmed the diagnosis. He thought it was important that it should be borne in mind that every cranial tumour could not be diagnosed by the ophthalmoscope. He believed that when there is congested papilla, there is a tumour; but there might be an intra-cranial tumour without any ophthalmoscopic appearances being present at all. With regard to the localization of these tumours, that depended a great deal upon what nerves might be engaged by their pressure. A tumour might be so situated as to cause no engagement of a cranial nerve, and in such cases congested papilla might be the only symptom.

Dr. MacSwiney considered Mr. Swanzy's remarks very valuable, and cited a published case in which the presence of a tumour was fixed during life to be in the pons Varolii, but after death was found occupying the falx cerebri.

Mr. Croly narrated the case of a student who presented the ophthalmoscopic appearances and general symptoms of cerebral tumour. The case proved fatal, but there was no *post mortem* examination permitted.

Dr. Fitzgerald, in the course of his reply, reiterated the statement which he had made in his former communication, viz., that a congested papilla might be present in cases where there was no tumour.

Notes on the Probable Employment of Anæsthetics in Ancient Times, especially in Scotland and Ireland.

Dr. T. More Madden said that having collected some notes from various authors, several years ago, on some of the earliest efforts to ensure insensibility to pain by anæsthetic agents, he thought the subject might not prove uninteresting to the Society. In Jocelyn's life of St. Mungo, patron of Glasgow, written in the twelfth century, mention is made of a *potu oblivionis*, called *letargion*, which was administered before the performance of surgical operations to produce insensibility to pain. The composition of this is not stated, but its essential component was probably the juice of the mandragora, or mandrake, one of the Solanaceæ, supposed by some to be identical with the atropa belladonna. Celsus refers to the same plant, and in one, of many, ancient Irish medical manuscripts in the Library of the Royal Irish Academy, numbered a Celtic materia medica of the twelfth century, an account of the mandrake also occurs, which was quoted by Dr. More Madden. It was probable, however, that this account of the plant was only a condensed description of that given by Pliny, who also speaks of its anæsthetic properties. Isidorus, also, who is another authority often quoted in the Irish manuscript above referred to, speaks in similar terms of the qualities of mandragora. Having cited some more recent allusions to a similar use of this drug, Dr. More Madden next alluded to mesmerism, which has been long used as an anæsthetic agent of great power in India, and to its introduction into England by Dr. Elliotson. However, in a paper published in the *Dublin Quarterly Journal*, in Aug. 1847, Dr. R. R. Madden gives a remarkable account of a ceremony practised by the Pagan Irish as far back as the year 50, A.D., which appears to have been almost

identical with that now employed by animal magnetism, for the purpose of throwing their patients into the mesmeric trance. In Middleton's tragedy of "Women, Beware of Women" (seventeenth century), there was an allusion to surgical anæsthesia as a familiar idea. Other quotations, proving that the practice of giving narcotics prior to operations, was followed in ancient times were adduced, showing, that although chloroform and ether were unknown until our own time, yet, that other means have been used to produce similar effects, from a very early period in the history of medicine.

On a Point in the Respiration of the Healthy Lungs.

Dr. H. KENNEDY said the point he desired to discuss was whether there is any difference in the normal respiration in the right and left lung? Forty years ago, Dr. Stokes had laid it down that the respiratory murmur was louder in the left than in the right lung, and although this was a most important statement, it did not seem to have met with any attention from subsequent writers. He (Dr. H. Kennedy) had instituted numerous physical examinations for the purpose of determining this point, and had satisfied himself as to the correctness of Dr. Stokes' opinion. As to the reason why it should be so, Dr. H. Kennedy was of opinion that it was in consequence of the left lung being smaller than the right, but yet receiving an equal nervous supply from the par vagum.

Dr. DARBY had always recognized the fact of the respiration being louder on the left side.

Dr. YEO also had been aware of the fact, and did not know that it was not generally received. He controverted Dr. Kennedy's theory, which he showed was physiologically untenable, and expressed his belief that the phenomenon in question might be easily and simply explained by remembering the difference in the muscular development of the infra-clavicular spaces on both sides of the thorax.

Dr. J. HUGHES and the CHAIRMAN agreed with Dr. Yeo.

Dr. H. KENNEDY, in reply, thought that the difference in the development of the muscular walls could have nothing to do with it, as two-thirds of the cases in which he had noticed the exaggeration of respiration on the left side, were young females in whom (he thought) there would not be any appreciable difference in admeasurement on either side. As Dr. Stokes had remarked, it was particularly noticeable in nervous females; thus further showing a nervous influence.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, December 12th, 1874.

LOMBE ATTHILL, M.D.,
President, in the Chair.

Morbid Retention of the Dead Ovum.

DR. M'CLINTOCK read a communication on "Morbid Retention of the Dead Ovum." Under this title he included all those cases where the ovum, or part of its involucra are retained *in utero* beyond some days after the death of the embryo. These cases were not very uncommon, and formed a group possessing great interest for the practitioner, the pathologist, and the medical jurist. He described very succinctly the grounds of diagnosis, and the general principles of treatment of these cases, and specially insisted on their great importance, viewed from a medico-legal standpoint. As to the length of time which the dead ovum may remain incarcerated in the uterus, his opinion, corroborated by that of Velpeau, is that the presence of the devitalized ovum is not tolerated beyond the ninth month of pregnancy. In one of the cases related from his own experience, the ovum, blighted at six weeks, was not discharged till the beginning of the ninth month of utero-gestation. In regard to diagnosis, the point of paramount practical importance to determine was, whether the patient carried a *living* ovum or not. In addition to the history of the case, the symptoms he set most reliance on, were enlargement of the uterus, patulence of its orifice, recurring sanguineous losses, menorrhagia, and fœtor of the discharge, though he admitted this last symptom to be as often absent as present. Where the hæmorrhages were not severe, he rather counselled an expectant line of treatment, at same time keeping the discharge in check as much as possible; but that if active interference was required, we could dilate the os uteri with laminaria or sponge tents, and thereby gain access to the interior of the womb, and remove the offending matters either by forceps or douching. He exhibited an ovum which had been expelled by a lady about seven months after conception, and five months from the time that its vitality had ceased.

Dr. CHURCHILL said he had met with several cases similar to those described by Dr. M'Clintock, and that there was always difficulty in dealing with them. Dr. Churchill detailed the particulars of some of these cases in which the diagnosis had been uncertain.

The PRESIDENT narrated the history of two of his patients in which a dead ovum was retained *in utero;* in one case for thirteen weeks, and in the other for four months.

Dr. J. A BYRNE'S experience in cases of abortion led him to believe that, contrary to what is generally taught, the ovum was not expelled for a considerable time after it perished. The fact of the dead fœtus remaining *in utero* without producing putrefactive symptoms was a point of interest.

Dr. DENHAM said that these cases are surrounded by a greater amount of annoyance than any other that cross the path of the Midwifery practitioner, and often tested his professional character most acutely. It was frequently an extremely difficult point to determine whether the fœtus had perished or not; if it had, the treatment was simple.

Dr. M'CLINTOCK, in the course of his reply, remarked that the weight of evidence tended to show that the discharge of the fœtus occurring immediately at the time of its death was a rare concomitant.

A Case of Intra-Uterine Amputation.

Dr. MACAN said the case he had the honour of bringing before the Society was one in which the left forearm of a healthy fœtus born in the Rotunda Hospital, had been amputated just below the insertion of the biceps. There was a semi-circular cicatrix on the stump about the size of a threepenny piece, which had evidently been a long time healed. The missing portion of the limb could not be found. Dr. Macan alluded to the rarity of spontaneous amputation in the fœtus, and stated that no example of it had been recorded as having taken place in the Rotunda for the last thirty years. He referred to Montgomery's paper on the subject, and to his theory that these lesions were caused by bands encircling the limbs and acting like ligatures. There was still doubt as to how these ligatures are formed or produced, and how they are applied round the limbs, supposing them to be the cause of these amputations. The author quoted the opinions and theories of Scanzoni, Simpson, Schroder and Furst on these points, and said that even if it is proved that spontaneous amputation is caused by adventitious bands passing from the amnion to the fœtus, the cause of the formation of these bands still remains to be decided.

A discussion followed in which Drs. Kidd, Denham, Darby, M'Clintock, etc., took part.

IRISH HOSPITAL GAZETTE.

VOL. III.] DUBLIN, JANUARY 15, 1875. [No. 2.

Hospital Reports.

DR. STEEVENS' HOSPITAL.

CASE OF POISONING BY CARBOLIC ACID.

By F. W. WARREN, L.R.C.S.I.; L.K. and Q.C.P.I., Etc., Resident Surgeon of the Hospital.

MICHAEL H——, æt. 40 years, a fireman in a distillery, of strong and muscular frame, was admitted into Hospital, November 26th, 1874, about 11 o'clock, P.M., presenting the following symptoms:—Pallor of the face, coldness of the surface, perfect insensibility and coma, respirations slow and laboured, and the pupils fixed and insensible to light; there was no erosion or mark upon the mucous membrane of the lips or mouth. The history given by his comrades was as follows:—That while engaged at his work, he suddenly fell to the ground, as they described it, in a fit; they also stated that he drank but one glass of whiskey an hour previous to his losing consciousness. On applying my nose to the patient's mouth, I distinctly perceived an odour resembling that of carbolic acid or creasote, to which I drew the attention of the class. My suspicions were confirmed very shortly afterwards by the foreman of the distillery sending me a small bottle of dark-coloured fluid, of which he stated the patient had partaken in mistake for whiskey. This fluid had the characteristic smell of carbolic acid, was of a dark brown colour, and was evidently the impure commercial form of the acid which is used for disinfecting purposes.

Treatment.—As the patient presented all the symptoms of extreme vital depression, I first administered a turpentine enema, and applied sinapisms to the calves of his legs. I then proceeded to introduce the stomach-pump, and evacuated a considerable quantity of dark fluid, corresponding in its physical characters to the contents of the bottle sent me by the foreman of the distillery. I continued to wash out the stomach with tepid water, until it returned clear as when introduced, and then substituted for the water equal parts of glycerine and water. The patient still remaining insensible, I administered 4 oz. of brandy by the rectum. He now showed some symptoms of returning consciousness. Ordered ammonia to be applied to the nostrils occasionally through the night. Pulse greatly improved in strength, 99 in the minute.

November 27th.—Recovered consciousness about 6 o'clock this morning. Complains of great pain over the epigastrium and in the track of the œsophagus. Vomits everything that he takes. There is considerable irritation and redness of the lips, but no erosion of the mucous membrane. Has a perfect recollection of one of his comrades handing him a stone jar, and desiring him to take a drink, which he did, thinking it was whiskey; states that the liquid had a very pungent, burning taste; after this he remembers no more. Pulse 110, weak and rapid. Tongue white and furred. Passed this morning about 8 oz. of very dark, almost black, urine, though perfectly clear and translucent when held towards the light. Sp. gr. 1·025. Intensely acid reaction. No albumen or any trace of blood could be detected after most careful examination. Ordered five minims of liq. opii sed. every two hours. To have thin arrowroot and milk in small quantities at a time. A linseed meal poultice to be applied constantly over the epigastric region.

28th.—Feels better to-day. The vomiting, which continued the greater part of yesterday, became less frequent towards evening, and finally ceased. The tenderness over the epigastrium continues, and also the pain in the track of the œsophagus, increased during swallowing. The urine presents the same appearances and characters as yesterday: a most careful examination of it failed to detect the slightest trace of carbolic acid or any of its allied compounds; neither could albumen or blood be found. Sp. gr. 1·025. Reaction intensely acid. Pulse 112. Ordered:—

℞.—Liq. morphiæ hydrochlor., ℥ij;
Aq. lauro-cerasi, ℥j;
Aquæ camphoræ, ad ℥ij.—M.

Fiat mistura. One teaspoonful every two hours.

From this date the patient improved rapidly, the epigastric tenderness and pain in the course of the œsophagus gradually subsided. The urine became paler in colour every day, depositing, as it did so, a copious cloudy precipitate of urate of ammonia, and the patient finally left Hospital upon the 5th December, quite well.

REMARKS.—I thought the above case worth recording, firstly, on account of its rarity; and secondly, because some of the most striking characters of the urine, described by various writers on this subject, were altogether wanting. I allude to the total absence of carbolic acid and albumen from the secretion. The analysis of the urine was conducted by Dr. Bell, to whom I am greatly indebted for his kind assistance. In the cases recorded by J. A. Waldenström and Ang.

Almén in the 2nd and 3rd numbers of the *Transactions of the Medical Society* of Upsala, in which changes were produced in the urine by the *external* application of the acid, it presented the usual characteristic dark, tar-like appearance, with albumen in small quantities, and no blood; but the presence of carbolic acid in the urine itself was indubitably and unmistakably demonstrated. Waldenström believes that the change of colour in the urine occurs only under the *external* application of the acid, and he records a case in which the *internal* use of carbolic acid produced merely a transitory albuminous condition of the urine. That the internal use of the acid will produce the discolouration of the urine was indisputably proved in the above case, but what that change of colour depended upon I am unable to explain. Waldenström accounts for the change of colour in the secretion, by the presence of some unknown oxidation products of the acid.

The treatment consisted merely in evacuating the contents of the stomach, and subsequently guarding against gastritis by small and repeated doses of opium, and strict prohibition of solid food for some time.

Original Lectures.

OCCASIONAL LECTURES TO HIS CLASS.

By EDWARD B. SINCLAIR, A.M., M.D., Univ. Dubl.; King's Professor of Midwifery, School of Physic, T.C.D.; Obstet. Phys. to Sir P. Dun's Hospital.

LECTURE I.—ON THROMBUS OF THE LABIUM.

GENTLEMEN—The accident I have to bring before your notice to-day, and which occasionally complicates labour, is one of rare occurrence; nevertheless, because of its seriousness, it is essential you should be thoroughly acquainted with its origin and treatment. I allude to thrombus of the labium. Bloody tumour of the labium. Effusion of blood into the loose cellular tissue of one of the labia externa or both. In order fully to understand this important subject it is necessary that I should briefly call your attention to some points in connection with the anatomy of the parts concerned. You are of course aware that the labia pudendi (majora) are capable of great distension, without injury to their tissues; inasmuch as a large infant at full term can, as a general rule, pass through the vulva with safety to them; composed as they are of elastic tissues; namely, skin, mucous membrane, a dartoid structure, and beneath both, a quantity of loose areolar tissue. This areolar tissue, as you know, is not unfrequently the seat of serous infiltration and abscess; causing the labia to be, sometimes, vastly increased in bulk. It is also the seat of the effusion in thrombus. But there are other structures to which I must specially direct your attention. When the parts are properly prepared, the labia majora and minora carefully dissected from off the deeper structures, and the areolar tissue removed, a curious and interesting vascular arrangement and a muscle are exposed. The latter is the constrictor vaginæ; the vascular arrangement, and this muscle nearly surround the orifice of the vagina. The muscle is external to the vascular plexus on each side. A glance at this drawing, taken from Kobelt, will at once make you acquainted with these structures.

One side only is dissected, and the drawing is in profile. The right half of the constrictor vaginæ has been removed to expose the plexus. The venous plexus can be traced from the clitoris downwards and backwards, to its termination, in a bulbous extremity on a line with the posterior fourchette. The structure gradually narrows at *m*, as it is traced forwards to the under surface of the clitoris. The bulbous extremity, *c*, is called the bulbous vestibuli, and that portion of the plexus, *m c*, where it commences, to narrow till it meets the clitoris, is termed the pars intermedia. The size of the plexus when undistended is equal in bulk to that of an almond, but much longer. When turgid it equals in size a fully-distended and full-grown leech. The pars intermedia, *m c*, terminates in rather straight and parallel vessels underneath the angular space formed by the clitoris, which then enter the corpus cavernosa, and inosculate also with the dorsal vein, *n*.(1)

The plexus is in relation externally with the constrictor vaginæ muscle, and is situated between that muscle and the vaginal wall. The constrictor vaginæ intermingles its fibres with the sphincter ani, and also takes a rather broad origin from the perineal fascia, midway between the anus and tuber ischii on each side; it then proceeds, band

(1) The bulbs of the vestibule (semibulbe) are considered, by Taylor, to be analogous to the bulb of the urethra; and the pars intermedia, of each side, are regarded by Kobelt to be the analogue (supposing them to be joined) of the corpus spongiosum urethræ, in the male.

like, round the vaginal orifice, becoming narrow as it reaches the clitoris, where it splits to embrace completely the root of that organ. The muscle has been considered to be the compressor of the venous plexuses, one of which I have just described, one of its uses being to compress the dorsal vein of the clitoris, and to force the blood from the bulbs and partes intermedia into that organ. From the obstruction to the return of the venous blood incident upon pregnancy, it can be easily conceived that these plexuses may become much distended, in fact form a varicocele, and under certain circumstances that their structures may give way, the blood be poured out into the surrounding loose areolar tissue, and a thrombus be formed. I have on several occasions, during the second stage of labour, felt these structures greatly distended, forming a large tumour, during uterine action, and in the intervals of action feeling exactly like a varicocele of the cord in the male. Upon not any one of these occasions did rupture take place, though I expected the occurrence momentarily. Rupture, then, of these plexuses, one or both, may result from previous over distension caused by obstruction to the return of the venous blood, followed by great pressure during the second stage of labour, previous to the birth of the child, or as the head just passes the vulva. In the one case the thrombus will cause the labour to come under the class "complicated;" in the other the complication will be "post partum," and consequently not of so serious a nature. The effusion may also result from direct violence prior to the setting in of labour, or may be thus produced even in cases unconnected with pregnancy. Previous injury or local disease may predispose to the formation of the effusion.

In the year 1776, a Doctor McBride, of this city, published two cases of thrombus of the labium. This is the first record we have in this country of the lesion. Indeed Denman would lead us to believe that this gentleman was the first who ever described it. A full description of it, together with its treatment, I find, has been given 320 years ago. Jacobus Rueff's book, "De Conceptu et Generatione Hominis," was published in 1554. Here is a translation of this volume by an unknown hand, which was published in London in 1637, under the following title:—"The Expert Midwife," "six bookes," "compiled in Latine, by the industry of James Rueff, a learned and expert Chirurgion; and now translated into English for the generall good and benefit of this nation."

At page 108 is found the following:—"But if it shall happen that some swelling, or congealed blood doe appeare in the fore-skins of the matrix under the skinne, arising from the paines and difficulty of the birth, the Veines or Fibraes being broken because of over much dilatation, opening and enlargement, as it falleth out; or some inward swelling or tumour of blood shall be bred, by which both the childe and secundines are wont to be hindred very much before the birth, let the Midwife make incision of that tumour, and open it with a cleane knife, when the matter shall be perceived to be digested and ripe, whether it shall appeare before or after the birth, let her squeise out the clotted blood, and let her press downe the swelling, wipe and cleanse those things which are defiled, and let her bring forth the childe *as she may, if it shall be unborne as yet.* After let her convey a pessary into the place, oftentimes let her annoint it with oile of roses, and bind it up daily, until she shall be whole. *For after the same manner, we, ourselves, have also oftentimes proceeded in these accidents and chances.*"(1) You can compare this with the original after lecture, which I have also before me.

The rarity of this accident is evident from the fact, that in our maternity of Sir P. Dun's Hospital, we have had but one genuine case of thrombus out of upwards of 3,400 deliveries; and during the seven years in which Dr. Shekleton presided as chief Physician over the Rotunda Hospital, when 13,748 deliveries took place, there were but seven such cases. Two of these cases terminated fatally. Let me give you a short history of them:—

No. 1.—A dissipated and unhealthy woman; received an injury on right labium some days prior to her ninth labour. The injury, probably a kick, was succeeded by swelling of the injured part. She had been a long time in the second stage of labour prior to admission, and entered the Hospital much exhausted. The head was in the brim of the pelvis; pulse 130. Perforation and crotchet delivery; thrombus not interfered with surgically; poultice, &c.; sloughed on third day; erysipelas; died on fourteenth day.

2.—An unhealthy woman; had been under treatment in the chronic division of the Hospital a week prior to the setting of her first labour, in consequence of ulceration and swelling of the left labium. The ulcer, which was not supposed to have been of a syphilitic nature, had nearly healed before action commenced. She had an ordinary delivery. In less than an hour afterwards thrombus rapidly formed and burst. The

(1) The following is the original:—
"Quad si contigerit etiam inflationem aliquam, vel concretum in præpretiis matricis sub cute apparêre sanguinem, ex partus laboribus et difficultate abortum, venulis aut fibris ruptis propter dilatationem, ut fit, nimam, vel interius tumor aliquis sanguineus enatus fuerit, quibus et infans et secundæ ante partum multum inpediri solent: cum tumorem sive ante sive post partum apparuerit, obstetrix, ubi materia tenuior et maturior visa fuerit, puro cultello incidat, concretum sanguinem exprimat, et inflationem deprimat, quæ commaculata sunt abstergat, infantemque si nondum natus fuerit ut poterit producat. Pessarium deinde sæpe inserat, oleo rosarum deungat, et quotidie donec sanata fuerit obliget. Eo enim modo et nos non semel in his casibus progressi sumus." *Title.*—De conception et generatione homainis, et üs quæ circa hæc potissimum considerantu. Lebri sex, congesti opera Jacobi Rueff, Chirurgi, Tigurini.—*From Collection of Spachius.*

hæmorrhage was alarming. The day after delivery she was attacked with phlebitis, and died on eighth day.

3.—An injury had been sustained some days prior to admission, over the right labium, the exact nature of which injury could not be arrived at. Admitted in the second stage, with a large thrombus already formed; it was opened, and exit was given to fluid blood, clot, and pus. Delivery natural; convalescence uninterrupted. Her second labour.

4.—Injury to left labium. Fall against a low stool four days prior to labour; a tumour formed soon after the accident; she did not draw attention to the condition of the parts till after her admission to Hospital. The swelling was too trifling to interfere with the passage of the head. Labour was natural and easy. Soon after delivery, however, a large thrombus formed, gave way, and discharged, with much fluid blood, a quantity of clots, and some pus; hæmorrhage brisk; did well.

5.—After an easy labour, her second, the fœtus being of ordinary size for term, a thrombus formed in the left labium, and gave way; copious hæmorrhage; convalesced well.

6.—Admitted in the second stage of her first labour. A thrombus was observed to be rapidly forming in the left labium. The forceps was used at once, and the child easily extracted, but the thrombus ruptured during the operation. The hæmorrhage was not considerable, and convalescence was uninterrupted.

7.—This was a fourth pregnancy. The first stage was nearly over upon admission, and the funis could be felt pulsating between the head and the membranes. Version was at once performed, and the child readily delivered. A large thrombus formed soon after delivery and burst; much hæmorrhage; but the woman made an excellent recovery.

These short histories are interesting and instructive, as illustrating the origin of thrombus from accident prior to labour, and the predisposition to its occurrence during labour from previous local disease. Besides, they lead to the supposition that the lesion, though a serious one, is by no means fatal when occurring during labour, unconnected with any defective condition of constitution or previous injury.

I shall now draw your attention to the symptoms of thrombus and its treatment.

Let us take the case which occurred in the practice of Sir P. Dun's maternity. A young woman, in her first pregnancy, had been safely delivered of a boy of ordinary size; the secundines were discharged, and the woman bound up. Soon afterwards she complained of pain and tension in the parts; this became more and more intense, and subsequently of a lancinating character, causing her to cry out. Presently, and suddenly, the pain and tension were relieved to a great extent, but profuse hæmorrhage set in. Upon removing the binder and examining the condition of the uterus through the abdominal parietes, it was found to be well contracted. A vaginal examination proved the left labium to be much enlarged, and just within the vulva the finger entered into a cavity filled with clot, the entrance to which was obtained beneath a ragged valvular flap of mucous membrane. The clots were turned out; the cavity was injected with cold water, and firmly stuffed with scraps of lint, which plugging was maintained in position by means of a pad and perineal bandage. The discharges were carefully cleansed by syringing with warm water twice daily, but the deep-seated stuffing was not removed till it began to loosen, by which time the cavity had much contracted. The contracting cavity was then daily dressed from the bottom in a similar manner as at first, till it was perfectly obliterated. This is a typical case of the progress and termination of a thrombus occurring after delivery. If you have an opportunity of examining a thrombus just before its rupture, you will observe the labium to be enormously distended, and its mucous surface everted. The mucous membrane distended, forming indeed the greater extent of visible surface, and of a dusky-red colour, nearly black at the point where the membrane will give way, where it has become very thin. The thrombus always ruptures on its mucous surface, and the opening is covered by a ragged valvular flap, and is generally large enough to admit two or three fingers. In a case where the thrombus has not been seen forming, and you are called to it after rupture has taken place; it is possible for an inexperienced person to consider the hæmorrhage as uterine; but the firm condition of the uterus; the history of the case, and the investigation of the state of the vagina and labia, at once disclose the true nature of the case. Should the formation of thrombus occur during labour, the tumour can be *observed* to increase rather rapidly, and the lip is *seen* everting. A woman may, under such circumstances complain of tension and pain in the labium, and your attention is thus drawn to the parts. In such a case I should advise the forceps to be applied before the tumour reached to any great size, and the head to be thus delivered. It will be generally found that as the head is passing the vulva the tumour will give way. The treatment, then, would be pressure till the secundines were delivered, subsequently, plugging of the cavity; and then the pad and the bandage.

Should the tumour have reached such a size as to be an impediment to the birth, I would recommend you to follow the advice of Rueff—"puro cultello incidat, concretum sanguinem. exprimat, et inflationem deprimat quæ commacu-

lata sunt abstergat, infantemque si nondum natus fuerit ut poterit producat."

Labial thrombus occurring during and after delivery, so far as my experience goes, I do not consider to be, by any means, a fatal accident. Under prompt and careful treatment these cases generally terminate favourably.

You are now in a condition to appreciate the following case, which, so far as I know, is unique. I was called to it in consequence of hæmorrhage having set in during the first half of the second stage of labour. The nature of the hæmorrhage puzzled the head midwife. The history was as follows:—Soon after the head had entered the pelvis, upon the occurrence of a strong effort, a gush of blood came from the vagina, and was reproduced during each recurrence of uterine action. The head midwife could make out that it was not placenta previa, and the nature of the flow was different from that of accidental hæmorrhage. On a careful examination I found the blood to come from an opening on the top of a little varicose tumour about the size of a filbert. The opening was of the calibre of a small goose quill, and its edge as defined as if it had been cut by means of a punch. While the uterus was acting, and the labia were divaricated, the blood issued from this opening in a continuous stream, and reached a distance of four or five feet from the bed. The veins of the lower extremities were varicose, and both labia were filled, with a varicose tumour, the distended plexuses, about which we have been talking. I immediately cast a double silk ligature, well waxed, beneath the tumour, with a needle, so as to invade some extent of the tissues. Each half of the base of the tumour was then strangulated. I then caused the four ends of the ligature to be lifted upwards, so as to draw the tumour out from the surface, and I encircled the base, beneath the ligatures, by means of another. I lastly applied the forceps and delivered the woman. The delivery was accomplished readily, and the woman progressed favourably. It is needless that I should now offer any further observations on this interesting case, and I hope I have given you a pretty good insight into the cause, symptoms, and treatment of labial thrombus in connection with delivery.

Progress of the Medical Sciences.

REPORT IN PHYSIOLOGY.

By J. M. PURSER, M.D., Dubl.,
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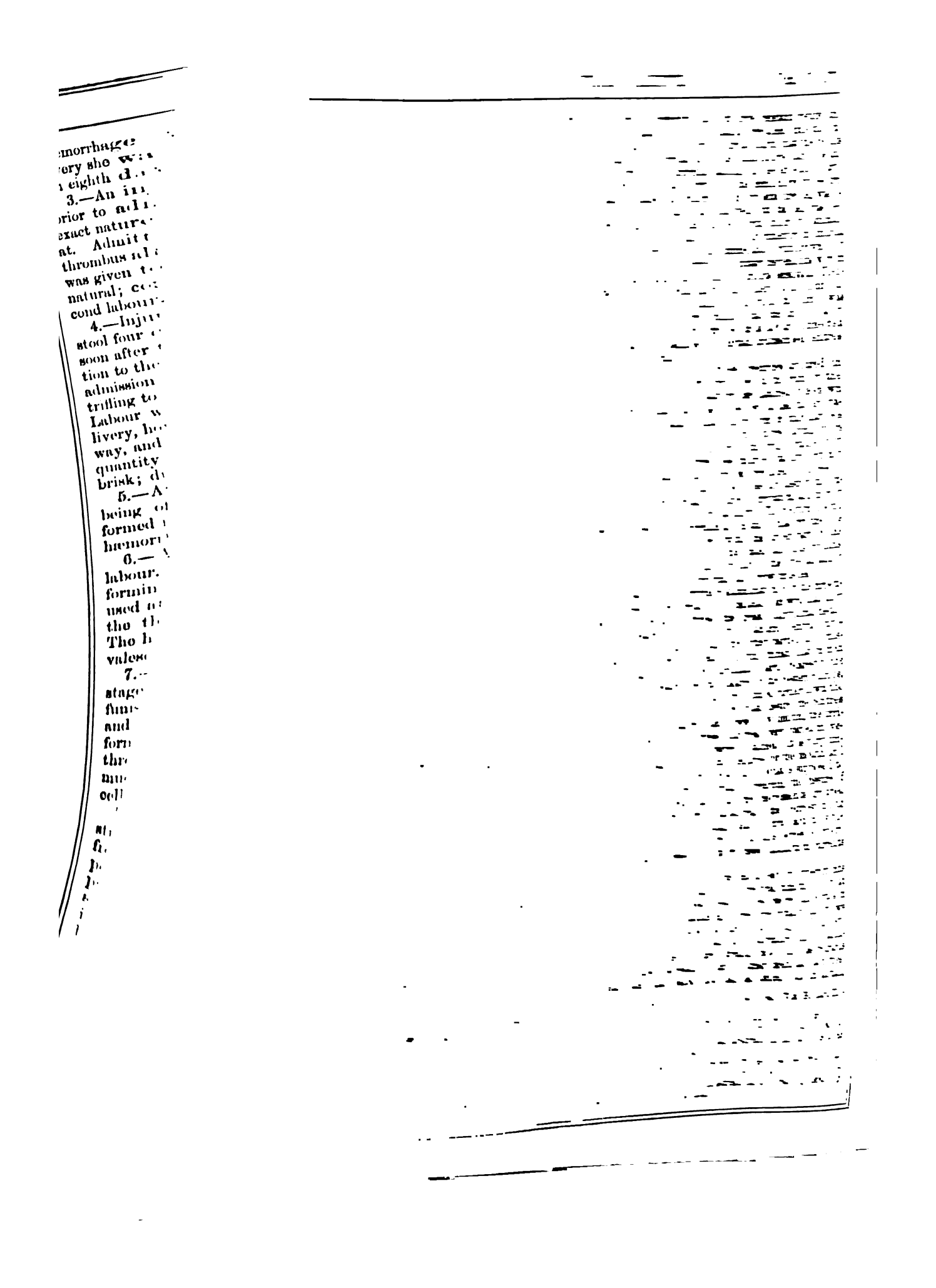
It is proposed, in this report, to give some account of the investigations which have been made since 1870, on the physiology of the different parts of the brain. The parts will be considered in the following order:—Cerebral hemispheres, tubercula quadrigemina, optic thalami and corpora striata, and cerebellum.

1. *Cerebral Hemispheres.*—Our knowledge of the physiology of these bodies has been, up to a very recent period, extremely meagre. Funke,(1) writing in 1866, says:—"Neither anatomical investigation nor comparative anatomy, nor physiological experiment, nor pathological observation, none of the means of investigation at our disposal have, up to the present, given us more than the most general knowledge of the physiology of these parts." There was, however, a remarkable uniformity of opinion as to the results of irritation applied either to the grey or white substance of the hemispheres. Since the earliest times it has been held that the brain is insensible, that violence applied to it, whether mechanical or otherwise, causes no sensation. This want of sensibility led the older writers to speak in a rather contemptuous manner of the brain.(2) An almost equal uniformity of opinion prevailed as to the absence of movements caused by irritation of the hemispheres.(3) Haller and Zinn, indeed, in the middle of the last century, said that by injury of the medullary parts of the brain, they had caused convulsive movements of the limbs, but their experiments are open to grave objections, and the irritations they employed were probably not localized to the hemispheres but reached the deeper parts. Longet found no movements caused when he irritated the cortical or medullary substance mechanically, by caustics, or by electricity; and similar negative results are reported by Majendie, Flourens, Matteucci, Van Deen and almost every other physiologist. Eckhard(4) states that lively movements of the fore limbs have been seen during removal, by slices, of the anterior cerebral lobes. But he thinks so little of the observation that he does not even quote the author of it. He, however, thinks that localized irritation of the brain, combined with histological research, forms a fruitful field for investigation.

Removal of the cerebral hemispheres has been often practised. After this operation the animal falls into a state of stupor. It preserves its equilibrium, and under the influence of external irritation, it performs perfectly co-ordinated movements; but it exhibits a complete want of spontaneity. This has, however, been questioned, and it has been stated that animals, after complete ablation of the cerebrum, are still capable of performing voluntary actions. Thus birds stand first on one leg, then change to the other, place the head under the wing, dress the feathers with the beak; frogs when irritated, will jump, if an obstacle be in the way, not straight forwards, but to one side; fishes will swim so as to avoid bodies placed before them, and it has even been stated that fowl will pick up corn, and frogs will catch flies. It is, however, generally believed that such of these movements as follow *complete* removal of the hemispheres are performed without the intervention of the will, and belong to the class of actions known as sensori-motor, while that in some cases the removal of the cerebrum was not complete, and that with the fragment left, the power of volition in part remained.(5)

That in these experiments sensation is not lost, seems certain from the observations of Longet, Vulpian, and many others. But all power of forming ideas from or about these sensations is altogether lost. All the higher functions of the mind consequently disappear on removal of the cerebral lobes, volition, judgment, comparison, memory, while motion, sensation, and the organic functions persist. From this, and from the facts of comparative anatomy, which show that as the intelligence of an animal increases, its cerebral hemispheres

(1) *Lehrbuch der Physiologie. Vierte Auflage. 2ter bd.: s.* 722.
(2) Ranke. *Grundzüge der Physiologie. S.* 750.
(3) Vulpian. *Leçons sur la Physiologie générale et comparée du système nerveux:* p. 678.
(4) *Experimentalphysiologie des Nerven systems. S.* 157.
(5) *Vide* Vulpian *loc. cit.*: p. 679. And *Archives de Physiologie* 1869: p. 301.



l after the removal of the dura mater which all experimenters have found to be extremely sensitive, the face of the brain was irritated by induction currents m Du Bois Reymond's coil, the intensity being in neral slight, but varying according to the varying exability of the parts of the brain. Violent or too proged Faradisation caused epileptic convulsions, beginng in the parts to whose cerebral centre the irritant as most directly applied, and then extending to other rts generally in regular order. We regret that ither our space nor our subject will admit of our ticing the pathological aspects of Dr. Ferrier's work. s value is very great, and its immediate bearing on edical diagnosis and practice most evident.

The first effect of the application of the electrodes to ie surface of the brain was to cause a condition of yperæmia of the parts acted on. This, Dr. Ferrier alls "functional hyperæmia," and thinks that his ethod of experimenting, by causing this, reproduces he normal functional activity of the different parts f the brain. Dr. Carpenter,(1) too, calls special ttention to the facts, which appear to show "that it is to the augmented activity of the reaction between the blood and the nerve substance producing an excessive tension like that of an overcharged Leyden jar, rather than the direct stimulation of the nerve substance itself, which causes the discharge of nerve-force that produces movement." This hyperæmia is most marked in birds, but nevertheless the brains of pigeons and fowls were found to be completely insensible to the action of electricity, which fact, taken in conjunction with the well-known resistance to the influence of opium enjoyed by these animals, appears to point to some peculiarity in the construction of their nerve centres. In the brains of cats, dogs, and rabbits, very well defined centres of movement were made out, whose positions are indicated in the drawings which accompany the paper. They are all situated in the anterior part of the brain, in front of the fissure of Sylvius. In the convolution bordering the great longitudinal fissure are the centres for the limbs, paws, and tail. In the middle external convolution those for the eyelids, face, and eyes, while the inferior and Sylvian gyri contain the centres for the movement of the whiskers, angles of the mouth, depressors of the jaws and tongue. According to the habits of the animal, certain centres are more highly and distinctly differentiated, as that for the tail in dogs, the paws in cats, the mouth in rabbits. All the movements produced "are purposive or expressional in character, and such as we should from psychological analysis, attribute to ideation and volition if we saw them performed by others," p. 73. This, and "the intimate relation subsisting between ideation and the unconscious outward expression of the idea in muscular action," Dr. Ferrier inclines to regard as "strong proof of the close local association of the ideational and voluntary motor centres. "Hence," he says, "I would incline to the opinion that the organic centres of word memory are situated in the same convolutions as the centres which preside over the muscles concerned in articulation" (Broca's convolutions.) "If this be so then we ought to have a hand memory, a face and eye memory, an ear memory, and thus we may ultimately be enabled to translate into their psychological signification and localize phrenologically the organic centres of various mental endowments," p. 76.

The hemispheres of the brain are symmetrical, and their action is crossed; this crossed action, however, is not equally apparent in the case of all the centres, but is most evident in those muscles or groups of muscles which act most independently of the corresponding ones on the opposite side; more evident in the anterior than in the posterior limb, and not at all evident in the mouth and tongue. Hence, in conformity with the results obtained by Hitzig, while irritation of the centres for the limbs causes movement only on the opposite side, stimulation of the mouth and tongue centre causes movement on both sides. The results of destruction of the centres corresponds; thus we have seen in the experiments of Fritsch and Hitzig that destruction of the motor centre for the paw in dogs caused very slight and partial paralysis, but lesion of the centre for the fingers in monkeys(1) causes almost complete paralysis. The movements of the paw in dogs, are, for the most part, associated with those of the corresponding limb on the opposite side, while the movements of the hand in the monkey are almost as independent as in man. So in cases of ordinary hemiplegia in man those parts which act most independently suffer most; in order, arms, leg, face and muscles of trunk, which, seldom or never acting on one side only, escape almost entirely. The cerebral centres for these bilaterally-acting muscles appear to be co-ordinated, so that one centre can fulfil the offices of both. This view, put forward some years ago by Dr. Broadbent,(2) is adopted by Dr. Ferrier, but he thinks that his own experiments indicate, not an *anatomical* but a *physiological* co-ordination through the media of the lower ganglia.

These considerations will explain why it is that in destruction of the mouth and tongue centre on one side there may be no paralysis of these parts. But the question arises, why destruction of this centre in men, if it occur on the right side, causes no effect, while if it occur on the left side, loss of speech (aphasia) results. The reason of this appears to be that most persons are "left brained;"(3) that is, that although a speech centre exists at both sides, yet that the left is the driving side, and has an undue preponderance in initiating voluntary movements. Just as the hand centre on the left side of the brain has been educated to give the right hand its superior dexterity, so the speech centre in the left side has been educated to initiate the voluntary recalling of words and associating of them with the ideas they express. The power of speech is lost just as the power of writing is lost in left-sided lesion of the brain, and as the patient can educate his left hand (right brain) to write, so he can educate his right speech centre to remember words, and learn again to talk. That such recovery of speech does not always occur depends very probably on the fact pointed out by Vulpian(4) that many persons with aphasia are also more or less demented.

Dr. Ferrier does not suppose that the nerve fibres coming from the several groups of muscles are continued uninterruptedly into the cerebral cortex, and there combined and co-ordinated. The action of the cortical centres is effected through the ganglia at the base of the brain, and those of the spinal cord, but the cortical centre is that which is concerned in the effort of the will. Irritation of the corpus striatum, as we shall see presently, produces simultaneous movement of all the parts whose centres are seated in the different centres of the cortex, and it is only by the action of these (or as Dr. Sanderson has shown, by irritation of the medullary fibres leading from them to the corpus striatum) that the groups of muscles can be severally called into co-ordinated movement. As Dr. Ferrier expresses it—

(1) On the Physiological import of Dr. Ferrier's Experimental Investigations into the Functions of the Brain. By W. B. Carpenter, F.R.S. *West Riding Lunatic Asylum Medical Reports*, IV. (1874): p. 10.

(1) On the Localization of the Functions of the Brain. By David Ferrier: *Brit. Med. Journal*, December 19th, 1874: p. 767.

(2) An attempt to remove the difficulties attending the application of Dr. Carpenter's theory of the function of the sensori-motor ganglia to the common form of hemiplegia. *Med. Chir. Rev.*, April, 1866: p. 468.

(3) This theory was first proposed by Dr. Moxon. On the connexion between loss of speech and paralysis of the right side. *Med. Chir. Rev.*, April, 1866: p. 481.

(4) *Loc. cit.*: p. 715.

the movements which are differentiated in the hemispheres are integrated in the corpus striatum.(1)

Tubercula Quadrigemina.—But little is known with certainty of the function of these bodies. Blindness has been seen to follow their injury, and they are supposed to contain the reflex centre for the movements of the iris. They are generally said to be insensible to irritation, but Adamük(2) has obtained very definite movements of the eyeballs by irritating different parts of the nates. Ferrier(3) finds, in opposition, to previous experimenters, that these bodies are extremely sensitive to electric irritation. Their stimulation causes violent opisthotonos, rigid extension of the limbs, clenching of the jaws, dilatation of pupils, and retraction of the angles of the mouth in *risus sardonicus*. Hence a careful examination of these bodies should be made in fatal cases of tetanus. The action of the corpora quadrigemina is more or less crossed, but violent irritation causes spasm of the extensors on both sides.

III. *Corpora Striata and Optic Thalami.*—Very little indeed is known as to the function of these parts. Drs. Todd and Carpenter look on the corpora striata as the great motor centre, and the optic thalami as that of sensation, but Vulpian(4) and most other writers consider both ganglia to have motor functions. Their destruction generally causes hemiplegia of the opposite side, and partial injury in animals gives rise to movements of rotation, differing in direction and in kind, according to the exact position of the injury. It is agreed on all hands that they are unexcitable.(5) Ferrier, however, finds that electric stimulation applied to the corpus striatum of one side causes contraction of all the muscles of the opposite limbs and side of the body, giving rise to rigid pleurosthotonos, the contraction of the flexors preponderating over that of the extensors. In the rabbit the pleurosthotonos is not well marked, but there is rigid rotation of the head to the opposite side, and grinding of the clenched jaws.

Irritation of the optic thalami produces no effect either of motion or sensation. Ferrier thinks that the paralysis which has been observed to follow lesion of this part, is due to injury to the motor fibres of the peduncles which pass under it. The fornix and hippocampus likewise are unexcitable.

IV. *Cerebellum.*—There is a tolerable uniformity of opinion as to the function of this part since the publication of the celebrated researches of Flourens. That it has a co-ordinating action on the movements of the body appears to be one of the best established facts in cerebral physiology, although how this action is effected is quite unexplained. But in addition to this co-ordinating function, Ferrier has shown that it regulates the movements of the eyeballs. By irritation of different parts of the cerebellum, he was able to produce every kind of movement of the eyes, even to rotation on their antero-posterior axis. The movements were symmetrical in both eyes, even although only one side of the cerebellum was acted on: when the irritation was violent or prolonged, nystagmus resulted. It would appear from this, as if the results obtained by Adamük, on irritation of the tubercula quadrigemina, were due to action on fibres, not terminating in these bodies, but merely passing through them on their way from the cerebellum.

Hitzig,(6) too, has produced movements of the eyes and vertigo, both subjective and objective, by passing a continuous galvanic current through the lower and back part of the brain in men and animals. He also found(1) that when in a rabbit the flock lobe of the cerebellum was removed, and a piece of ice placed on the cut surface, the animal showed signs of giddiness, fell over to the uninjured side, while the eyes were strongly rotated to that on which the lesion was situated. Ferrier(2) found that irritation of this part of the cerebellum in rabbits causes rotation of the eyes on their antero-posterior axis. We may mention that Hitzig supposes the falling on the side, the rolling movements, and the other forced motions (Zwangsbewegungen), observed in injuries to the cerebellum to be due neither to paralysis nor spasm, but to be voluntary movements performed by the animal in the attempt to recover his equilibrium, supposed to be in danger by a delusive feeling of want of support in, or of falling away to, the side *from* which he rolls.

Dr. Ferrier has recently greatly extended his researches, using in his experiments not only rabbits, cats, and dogs, but also monkeys, jackals, guinea pigs, rats, pigeons, toads, frogs, and fishes. The results of these experiments have as yet been published only in abstract.(3) The chief interest lies in the experiments on monkeys. In these animals Dr. Ferrier has been able not only to localize the motor centres, but also several regions whose function is the perception of the impressions of the special senses. Thus, irritation of the angular gyrus caused certain movements of the eyeballs and pupils. Destruction of this gyrus gave data for regarding it as the cerebral expansion of the optic nerves, and the seat of visual perception. Irritation of the superior temporo-sphenoidal convolution, caused pricking of the ears, and other indications of excitation of ideas of sound. It is probably the cerebral termination of the auditory nerves. The sense of smell appears to be seated in the uncinate convolution. The senses of touch and taste could not be localized with certainty, although indications of their position were gained. As is known, Meynert(4) and Gratiolet(5) have traced some of the nerves of special sense up to the cortex. Their views have not met with general acceptance, but the results of physiological experiments will probably soon settle the question.

The rotation of the head and eyes to the non-paralysed side, which occurs very commonly in hemiplegia, is accounted for by injury to a centre which exists in the superior and middle frontal convolution, and whose irritation causes movement of the head and eyes to the opposite side. When this centre is destroyed the muscles on the opposite side are paralysed, and the head is rotated to the side of brain lesion, just as the mouth is drawn to this side, by the unopposed action of the muscles. Ferrier therefore looks on this phenomenon of rotation as of a paralytic nature. Vulpian,(6) on the other hand, considers it spasmodic. We have ourselves seen cases in which the existence of temporary spasmodic action of the muscles could scarcely be doubted.

In monkeys, the antero-frontal part of the brain, with the inferior frontal and orbital convolutions, gave no definite result on stimulation. Extirpation caused a condition like dementia. The island of Reil also was found to be insensible. The occipital lobes did not react. Their destruction caused no loss of sensation or motion, but abolition of the instincts of self preservation. It thus appears that "those centres of movement which may be regarded as giving expression to

(1) Pathological Illustrations of Brain Function. *West Riding Lunatic Asylum Medical Reports*, IV. (1874): p. 47. *Brit. Med. Journal*, Dec. 19th, 1874: p. 767.

(2) Brücke. *Vorlesungen*, II. 57.

(3) *Experimental Researches:* p. 63.

(4) *Loc. cit.:* p. 658

(5) Vulpian: pp. 656 and 659. Funke, *l. c.* II. 710.

(6) *Ueber die beim Galvanisiren des Kopfes entstehenden Störungen der Muskelinnervation und der Vorstellungen, vom Verhalten im Raume. Archiv für Anatomie.* 1871: s. 716.

(1) *Weitere Untersuchungen zur Physiologie des Gihirns. Ibid.* 1871: s. 771.

(2) *Experimental Researches*: p. 71.

(3) *The Localization of Functions in the Brain. Proceedings of Royal Society.* 1874. No. 151: p. 229.

(4) For a good *résumé* of Meynert's observations, see *Archives de Physiologie.* 1874: p. 382.

(5) Vulpian, *l.c.!* p. 563.

(6) *Loc. cit.:* p. 589.

mental states that man shares with animals beneath him, are all located in the *hinder part* of the *anterior lobes*, and the *anterior portion* of the *middle* lobes, the part of man's cerebrum which corresponds with the entire cerebrum of the lower mammalia."(1)

By a comparison in different animals of the parts of the brains whose irritation causes similar effects, Ferrier has shown the possibility of constructing an anatomical homology of the convolutions from the data of physiological experiment. As an example of this, he shows that the fissure of Rolando in the brains of men and monkeys is the homologue of the crucial sulcus in carnivora. Hitzig(2) had previously come to the conclusion that the crucial sulcus in dogs represented the blended *sulcus centralis* (fissure of Rolando), and *sulcus calloso marginalis* of higher animals.

Before leaving the researches of Ferrier, we must briefly notice some objections which have been raised to his results.(3) These are chiefly of two kinds. First, it is said that the effects are not caused by irritation of the cortex, but by conduction of the electric irritant to the ganglia and excitable parts at the base of the brain. This is refuted by the predictable nature of the results; by the very different effects which follow stimulation of closely adjacent parts; by the very large surface of the brain, which gives no result, although it is quite capable of conducting, and is often (as in the case of the *insula*) nearer to the supposed excitable parts than are those portions of the cortex which respond to irritation; by the identical results got by irritating corresding parts of the brains of different animals; and by the fact already noticed that the movements often occur after the stimulation has ceased. Second, it is said that the cortex cannot contain motor centres because it loses its excitability when the animal is completely under the influence of chloroform or ether while, under these circumstances, the corpora striata and tubercula quadrigemina still react to stimuli. But Ferrier has shown that the absence of results in anæsthesia absolutely disproves the conduction theory; for no one will suppose that the brain loses its electric *conductability* by the inhalation of chloroform. It shows plainly that the cortex has now lost a property which it formerly possessed. The motor centres lose their excitability in regular order under the influence of anæsthetics. 1. Cortex. 2. Corpora Striata. 3. Tubercula quadrigemina.

An experiment, very interesting, but we should hope scarcely likely to be repeated, has been made by Dr. Bartholow,(4) who Faradised the brain of a woman, whose cranium and superjacent soft parts had been destroyed by ulceration. Distinct movements of the opposite side of the body were produced, and on increasing the strength of the irritant a violent epileptic attack was induced. The current was applied by needles thrust into the brain. As was to be expected, inflammation and death resulted in a few hours. Dr. Bartholow thinks the patient's death in no way attributable to the experiment. The observations, so far as they go, confirm the results of Ferrier and Hitzig.

A very extended series of experiments on the functions of different parts of the brain have been made by Nothnagel.(5) The method he employed differed altogether from that of Hitzig and Ferrier. He produced destruction of small portions of the brain by injection of a minute quantity of a saturated solution of chromic acid, or by laceration with a needle. The animals (chiefly rabbits) survived a long time, and allowed of a careful examination of their symptoms being made. We had prepared abstracts of Nothnagel's papers for insertion in this report, but the undue length to which it has already extended compels us to hold them over for the present. We regret this the less as we think that Nothnagel's results, although in some respects of great interest, are far more open to criticism, and are of much less real importance than those of Ferrier.

We have not had an opportunity of seeing the original of Fournié's work.(1) His method appears to be a bad one, and his experiments do not seem to bear the interpretation he puts on them. His observations are submitted to a very severe criticism by Nothnagel.(2)

It is only since this report has been in the printer's hands that we have received Hitzig's book(3) on the physiology of the brain. This consists of a reprint of the papers above noticed and of some others, together with a good deal of new matter. For our purpose the most important part is that devoted to a criticism of Ferrier's work. He objects to the *method* of Ferrier, as the strong and high tensioned currents employed could not remain localised, but must extend to parts of the brain more deeply seated than the cortex. He has himself employed Faradisation largely, but chiefly to confirm the results obtained by the use of the battery current. He objects to Ferrier's *results* because they do not agree with his own, gained as he thinks by a more perfect method; because the number of Ferrier's experiments was small; because the results of the different experiments did not correspond, whether these were made on animals of the same or of different species. He thinks that the movements produced by irritation of those parts of the brain which he found unexcitable were due to the imperfect method employed by Ferrier, a conclusion which is further borne out by the absence of effects following extirpation of the same parts.(4) And he objects to Ferrier's *morality*, because this writer has not sufficiently acknowledged the extent to which his results, so far as they are trustworthy, have been anticipated by those of Fritsch and Hitzig. There may, perhaps, be some weight in this latter objection, although we are sure that Dr. Ferrier had no intention of wronging his German fellow workers. In other respects the criticism of Hitzig, which refers entirely to Ferrier's first paper, loses most of its weight in the face of the great precision of the results got by the more recent and extended observations of the same writer.

From the results of his experiments on the brain of the monkey, Hitzig alters his view as to the homology which he supposed to exist between the fissure of Rolando in this animal and the crucial sulcus in carnivora. In the monkey the motor centres all lie in the ascending frontal gyrus (by some anatomists considered as part of the parietal lobe, and which lies in front of the fissure of Rolando), while in the dog they are situated in the gyri *posterior* to the crucial sulcus.

(1) Carpenter. *Loc. cit.*: p. 15.

(2) *Archiv. für Anatomie.* 1873. s. 430. *Revue des Sciences Méd.*: t. III.; p. 493.

(3) *Critique experimentale des travaux de MM. Fritsch, Hitzig, Ferrier*, par MM. Carville et. Duret. *Examen de quelques points de la physiologie du Cerveau.* par E. Dupuy. *Rev. d. Scien. Med.*: t. III.: pp. 493, et seq.

(4) *Experimental Investigations into the Functions of the Human Brain. American Journal of the Med. Sciences.* April, 1874.

(5) *Archiv für path. Anatomie.* Bd. LVII. s. 184. LVIII. s. 420. LX. 128. LXII. 201.

Reviews.

Croup, in its Relations to Tracheotomy. By J. Solis Cohen, M.D. Philadelphia: Lindsay and Blakiston, 1874: pp. 78.

Dr. Cohen is lecturer on Laryngoscopy and Diseases of the Throat and Chest in Jefferson Medical College, and therefore may be presumed to know something of the subject on which he writes. The essay before us was

(1) *Recherches Expérimentales sur le fonctionnement du cerveau.* Paris, 1873.

(2) *Loc. cit.* LVIII. s. 433.

(3) *Untersuchungen ueber das Gehirn.* Berlin. 1874.

(4) *London Medical Record*, Jan. 6th, 1875: p. 3.

read before the Philadelphia Medical Society early last year, and being referred to the similar Society of Pennsylvania, was ordered by the latter to be printed in their transactions. To the writer's definitions and pathology many might be inclined to take exception, but there is so much industry displayed in his researches, so much dispassionate reasoning in his conclusions, and so much in his observations peculiarly applicable to the question of tracheotomy in croup in this country, that his essay should be in the hands of every Irish Practitioner who desires to have the most complete data from which to form a conclusion, when the question confronts him. Thus, in the following observations taken from the very first page, the name of Dublin might, with truth, be substituted for that of the American City:—"Tracheotomy for croup is generally regarded with much disfavour in this city. Its results in Philadelphia have been less encouraging than almost anywhere else; probably because, as a rule, the operation is postponed too long; possibly, because our medicinal treatment of croup cures a number of cases which, under less efficient management, would become subjects for tracheotomy, but, whatever, the cause, the results, in the comparatively few instances in which the operation has been performed, have been so disheartening that *many practitioners refuse to sanction tracheotomy in croup, under any circumstances.*" The writer then proceeds to analyse and comment on tables from almost every country in Europe, *except Ireland*, and gives the results in *no less than* 5,000 *cases* operated on. From the following observations (p. 6) it will be seen that, though he argues from carefully collected statistics and results, he does not dogmatize; and, while seeking for a more extensive trial of the operation, he wisely gives due prominence to its possible misapplication:—"That tracheotomy saves many croup patients from death otherwise inevitable, and that, too, even under unfavourable circumstances, there has long been no reason to doubt; there is still little doubt either, that patients are occasionally tracheotomized unnecessarily, but the proportionately small number of such instances, whether errors of judgment or errors of prudence, is, in all probability, insignificant in comparison to the number of patients saved, by the operation, from certain death; life being preserved in the one instance, while it is not sacrificed in the other. Tracheotomy, in itself, does not cure croup. It affords an opportunity of recovery by postponing, or insures it by averting death." The writer quotes the illustrious names of Barthez, Guersant, Trousseau, Spence, Buchanan, *cum multis aliis*, to show the general results of the operations, and especially the increased success which has of late years—since the after-treatment has been so carefully attended to—followed it. Thus, Guersant lost his first twenty-three cases (between 1834 and 1841), but after that saved 17 out of 82. Trousseau (1854) reported his 222 operations with 127 recoveries. In Great Britain, Spence has had 87 operations with 28 recoveries, and Buchanan has saved 13 patients out of 39. Dr. Cohen then proceeds to dwell on four very important points; these are:—1. The indications for the operation. 2. The points of importance connected with the operation itself. 3. The after-treatment of the disease and of the surgical wound. And, 4. The casualties which prevent recovery.

There are many reasons why the study of this essay would be beneficial to Irish physicians and surgeons, and we could prove this more conclusively did space admit of further quotations. As the statement italicised (and the italics are ours) in our first quotation, exactly describes the feelings of *most* medical men here, we think a few words as to the cause why the operation should be in such bad odour may not be inapplicable, and may give some consolation to those who have dared to throw off the trammels of recognized authorities, and to think for themselves in critical moments. One of the foremost writers, teachers, and operators of his time was, undoubtedly, the late Professor Porter. As far back as the year 1826 he wrote thus:—"But bronchotomy has in many cases of croup been successful. True, but where are the thousand instances to the contrary that might be brought against each single one of them. I have performed the operation myself on the child, and have seen it frequently done by others, and in no one case has the life of the patient been saved. I have known and heard of it often, but never understood that it produced a recovery." These observations are quoted with unqualified approval by Dr. Cheyne in his article on croup in the "Cyclopedia of Medicine," and as his clinical description of the disease is matchless, and his authority unquestionable, Mr. Porter's observations had much additional weight given to them. Mr. Porter's next remarks on the subject (1837) were still more emphatic. He says, "In this country I have not for some years heard of bronchotomy having been seriously proposed for the relief of *any* form of croup, and I feel considerable satisfaction in the reflection that I have, in some small degree, contributed to the establishment of so desirable a practice. It is, however, to be regretted that some uniformity of principle cannot be obtained, and that even to this day Continental surgeons have left the treatment of the disease in this respect undetermined. . . . . Moreover, after *diligent search*, I have not been able to find more than *a few cases* of successful operation in croup, and these attended with such curious and unusual circumstances, both of symptom and treatment, that it is doubtful how far they ought to be considered as examples of croup at all. Certainly, I regard such reports, when I do not doubt their authenticity, rather as evidences of the possibility of escape, than as examples which the teachers ought to adduce or the practitioners to imitate."

Mr. Kirby is reported (Chelius' Surgery by South, p. 399) as expressing his objections to the operation in precisely Mr. Porter's language. Now can anything be more illogical or misleading than such dogmatism on the part of Mr. Porter or Mr. Kirby? It simply amounts to this: "I have performed tracheotomy in two or three cases of croup; it has failed, and therefore it should not be done. Others are reported to be more successful, I do not believe it. Therefore never perform tracheotomy in croup."

That respect for constituted authority which is, perhaps, unfortunately, one of the Irish professional characteristics has led to a line of practice completely in accordance with Mr. Porter's views, but which, in all probability, has prevented many patients in croup from obtaining their only chance of recovery. Let the reader only calmly consider the difference between Mr. Porter's conclusions after his personal experience of *three* unsuccessful cases of croup operated on, and Dr. Cohen's careful judgment after weighing the results of Five Thousand; or, M. Guersant's action after twenty-three successively fatal operations.

We have said enough to indicate the value of Dr. Cohen's essay, and, as we strongly recommend its study to all who take an interest in the question it deals with, we are inclined to regret that so high an authority as the late Professor Porter did not survive long enough to profit by our recommendation. Had he possessed the analysis of 5,000 cases to guide his judgment, it is but reasonable to believe that his conclusions would have been different, and, that Irish Surgery, undeterred by the weight of adverse authority, would have, in recent times, contributed its just *quota* of successful cases to add further strength to Dr Cohen's arguments.

Correspondence.

PARIS.

FROM OUR OWN CORRESPONDENT.

A Clinical Lecture on a Case of Complete Occlusion of the Posterior Nares by Professor Richet of the Hotel Dieu: Physiological Considerations—M. Mallez on Lithotomy and Lithotrity.

In going through Professor Richet's Ward in the Hotel Dieu lately, I was shown a case of complete occlusion of the posterior nares in a man caused by syphilis, and as the case seemed to me very interesting, I have thought it worth while communicating it for the benefit of the readers of the Gazette. I am indebted to one of the Internes (dresser), for the following history of the case:—The patient was a Marine, of a robust constitution and in perfect health; but as he suffered great inconvenience from the above-mentioned infirmity, which materially interfered with the acts of deglutition and phonation, he applied at the Hospital to be relieved at any price. According to his own statement, he had been affected about ten years ago with a chancre, which was followed by mucous patches around the anus and syphilitic sore throat, for which he was treated in the Naval Hospital at Toulon. The patient was, after prolonged treatment, cured of these accidents, but there remained a contraction of the posterior nares, which continued to increase until complete occlusion took place from adhesion of the velum pendulum to the fauces. What struck M. Richet was the importunity of the man to have the infirmity removed, as at first sight he did not consider any operative interference necessary. But the patient having explained that his respiration was much impeded, that to get rid of the secretions of the nostrils, he was obliged to place himself in such a position as to let them run out by their own gravity, that to a certain extent he had lost the senses of smell and taste, and that finally his voice was nasal, or rather that it had assumed a peculiar tone. M. Richet decided upon operating. Before, however, applying the knife, M. Richet resolved upon making a minute examination of the parts, and found that his original diagnosis was correct; viz., that there was complete occlusion of the posterior nares, which occlusion was not direct or immediate. This was proved by injecting milk into the right nostril, which escaped through the left without a single drop descending into the throat. It need hardly be said that milk was adopted in the experiment as owing to its white, chalky colour, it could be more easily seen. The posterior openings of the nares were intact, or rather there was free communication between the two nostrils behind the septum nasi, as was proved by the above experiment; the Eustachian tubes were unaffected, as the patient could distinctly hear the ticks of a watch; the uvula had disappeared. At a clinical lecture on the subject, M. Richet make some instructive remarks, and explained the mechanism of the difficulty the patient experienced in blowing his nose; in this act, continued the Professor, the mucous secretions can only be expelled by a column of air passing through the nostrils; breathing must take place through them, which is just what the patient could not do. The lachrymal secretion was scarcely increased, and finally the act of deglutition was greatly impeded owing to old cicatrices and adhesions in the upper part of the pharynx. But the physiological interest of the case consisted principally in the senses of taste and smell. The patient was insensible to odours whether volatile or pungent; when, however, such substances as vinegar, wine, ammonia, were placed in contact with the mucous membrane of the nose with his eyes blindfolded, he complained of a smarting sensation, though he could not distinguish one from the other, and this would tend to prove the integrity of the general sensibility of the fifth pair of nerves; the patient felt the presence of these liquids, but did not even attempt to sneeze when the surgeon introduced a catheter into his nostrils. The sense of taste was not in a better state of preservation; the patient's eyes having been bound up as before, M. Richet placed, not only at the tip of the tongue, but at its base, some common salt, pepper, and sugar, in succession, and the only sensation felt was that of some insipid dust or powder. When sugar was presented to him with his eyes open, he fancied he would taste it, but when he put it into his mouth, it felt as if he were eating earth. When such substances as vinegar, wine, milk, butter, were placed on the tongue he felt a smarting sensation, and the effect was only a little more marked when liquor ammonia was applied to it. Sapid liquid substances produced a pricking sensation; whereas sapid solids produced that of dust or some inert powder. In presence of such a state of things, M. Richet put the question as to whether these phenomena were due exclusively to the effect of the occlusion, or whether they were not dependent on some profound syphilitic lesion. He stated that he had never before seen or heard of a similar case, but a Military student who was following him in the Ward recollected one he had seen at Strasburg under the care of M. Sédillot, who proposed an operation to which the patient would not consent. M. Fournier, the well-known syphilographer, and one of Ricord's pupils, recalled to mind three cases he had seen under the care of his former master, but which, unfortunately, were not published. Occlusion of the natural openings, continued M. Richet, is very rare; a few cases of occlusion of the eyelids are on record; as for artificial occlusions, these are extremely difficult to obtain. Vidal de Cassis attempted eight times in the same subject to effect an occlusion of the vagina, in a case of vesico-vaginal fistula, but without success. In certain cases of incomplete occlusion, atresia of the mouth, for instance, some Surgeons had recourse to autoplastic operations. Dieffenbach performed a similar operation in Paris, which he designated "l'autoplastie par bandage;" this consists in removing the cicatricial portion contiguous to the healthy mucous membrane, cutting through the latter, and then inverting it. M. Richet tried this mode of procedure in an autoplastic operation of the eyelids, which was attended with success: but he finds it impracticable in the case under notice, not only from the situation of the lesion, but from nearly the whole of the tissue included in the occlusion being cicatricial.

M. Richet had, therefore, no alternative but to invent some operation suitable to the present case, which he divided as follows:—He proposed, in the first place, separating the velum pendulum from the pharyngeal wall; and, secondly, to keep the parts separated from one another so as to prevent re-adhesion. This, M. Richet effected in a most skilful manner: he succeeded not only in detaching the velum pendulum from its adhesions, but he punctured two holes through it which corresponded with the posterior nares. The whole operation was performed without much loss of blood, and the patient suffered but little pain, but he laboured under great anxiety as to the result of the operation; he was, however, immediately relieved, as he was able to breathe through the nostrils, and to blow his nose, which he had not been able to do for several months. He left the Hospital only a few days ago, the operation having perfectly succeeded, and the functions that were deranged were completely restored.

M. Mallez, a specialist of the treatment of diseases of the urinary organs, lately read a paper before the Academy of Medicine on the relative merits of lithotomy and lithotrity. His observations may be summed up as follows:—In reviewing the Surgery of the urinary passages one is struck with the great number of lithotomy cases to be met with now-a-days, compared with the

period comprised between 1840 to 1850. Lithotrity through the natural passages has ceased to be the rule, as lithotomy the exception. The two methods of treatment in calculous affections are not opposed to each other; on the contrary, the one completes the other. To practice lithotomy the Surgeon does not precede the operation by fruitless attempts at lithotomy, but cuts into the bladder at once and removes the stone, the indications for such an operation being now better understood than they were twenty or twenty-five years ago. M. Mallez had in two years performed 24 lithotomy operations; two were effected with the galvano-cautery, one of which proved fatal; two by the method known by the name of perineal lithotrity, both the subjects died; two by a mixed method, that is, by combining the pre-rectal incision with dilatation of the neck of the bladder; and eighteen by the pre-rectal plan, without any other modification than that necessitated by the use of Amussat's double cystotome, which is, in reality, an ordinary pair of scissors with the cutting edges outwards, and which is generally used in these cases. All the subjects were cured.

THE EMOLUMENTS OF ARMY MEDICAL OFFICERS.

TO THE EDITOR OF THE IRISH HOSPITAL GAZETTE.

DEAR SIR—Will you kindly allow me space for a brief reply to Dr. de Chaumont's letter of Dec. 24th.

Truly yours,
E. HAMILTON.

120 STEPHEN'S GREEN, DUBLIN,
11th January, 1875.

DEAR SIR—As a controversy between you and me is calculated to excite little interest in the Army Medical Department, and still less among the profession at large, I should not have troubled you with any reply to your letter, containing, as it does, little that affects the main questions now at issue. But, as you have thought proper to charge me with a "personal attack" on you, and with "gross misrepresentation," I cannot permit it to remain unnoticed.

To the verdict of our impartial readers I submit whether the pamphlet contains either one or the other, while at the same time I must, in the strongest terms, disavow the *intention* of a personal attack or gross misrepresentation.

To the atrocious crime of having omitted a letter from your name I must plead guilty—by implication—the printer having neglected to furnish me with a final revise of those pages in which your name occurs. I find, however, by the correction in your letter, that even you are not raised above the mischances of letter-press.

As to any opinion on your paper in the *Edinburgh Medical Journal*, I have merely stated the effect produced by it on the minds of a large number of your brother officers, communicated to me, and, as you say yourself, expressed by anonymous letters in the journals, which we may fairly presume were written by medical officers who, for obvious reasons, could not affix their signatures.

Fully appreciating the value of standing well with our *confrères*, I am pleased that I have afforded you the opportunity of setting yourself right with the Department, and explaining the object with which you wrote, as it is an absolute fact that the impression produced by your paper in the minds of not one or two, but a large number of army surgeons, was that of alarm and anxiety as to the influence which it might exercise on their prospects. Whether or not it was *calculated* to mislead I shall not undertake to determine; but the result produced was very different from that which you allege was intended; and the danger of your writing being similarly misconstrued by those in high official authority, is, I admit, a *giant which I have been conjuring up in my mind.*

It is not any particular assertion in your paper which has caused this impression of which you complain, but the general complexion of the entire statement, and perhaps the averages which you have selected.

Thus the difference between 18/10 a day and £1 pension may appear insignificant for the purposes of figures, but to the married officer, with a family, it means £21 a-year and a good round sum on commutation. Again, it is satisfactory to know the source from which you have derived the five per cent. rate of interest, and to learn, even now, that you regard it as *most unfairly* adopted.

In conclusion, I beg to state I have neither leisure nor inclination further to pursue the subject, or the discussion which may arise respecting it. I have not intermeddled in the affairs of the Department in any Quixotic spirit of knight errantry. I have endeavoured to discharge what I conceived to be a responsible duty. How I have discharged that duty I must leave to others to determine. My intention, however, has been to elicit plain unvarnished truth, to shed the light of facts over a debated question, not to indulge in personal attacks or gross misrepresentations.

I am not so vain as to suppose that I, a layman, could grasp the intricacies of the Army Medical Department without liability to errors. If they are trifling I hope they will be pardoned; if they are serious and important, and materially affect the questions at issue, they will be corrected by public comment, and be thus rendered harmless and unproductive of evil. If, on the other hand, the pamphlet has effected the smallest amount of good, my highest ambition is realized, and I am amply repaid the time, labour, and expense which it has cost.

Truly yours,
EDWARD HAMILTON.

DR. F. DE CHAUMONT.

Reports of Societies.

PATHOLOGICAL SOCIETY OF IRELAND.

December 19th, 1874.

ROBERT McDONNELL, M.D., F.R.S.,
President, in the Chair.

Psammoma of the Dura Mater.

DR. E. W. COLLINS said the tumour he laid before the Society was taken from an elderly subject in the Anatomical School of the University. It grew from the inner endothelial surface of the left side of the falx cerebri, where it was attached to the crista galli. It projected freely into the subdural space, and had hollowed out a slight depression upon the overlying convolutions of the left frontal lobe of the cerebrum. It was soft in consistence, so as readily to separate from its attachment, about the size of a walnut, rather more oval than round, and of a greyish-white colour. When hardened in spirit it exhibited microscopically the appearances characteristic of the tumour to which the names Psammoma and Angiolithic Sarcoma have been given. A fibrous investment and fibrous stroma constituted the chief bulk of the tumour. Imbedded in it were very minute, isolated, calcareous particles of brain sand, reflecting light, and presenting their peculiar concentric lamellar arrangement when examined under

a high microscopic power. They varied somewhat in size and number in different parts, but were chiefly remarkable for their very small size and scanty distribution throughout the fibrous elements of the tumour. The tumour was remarkable for its vascularity, even the coarse ordinary injection freely permeating its structure. Some of the sand particles bore a suspicious proximity to the walls of the blood vessels, though no such definite connexion with the vascular wall could be clearly ascertained as led Ranvier to the conclusion that they are primarily deposited in ampullary dilatations of the walls of the vessels from which they subsequently become detached. No cells were found in the tumour differing from those proper to sarcoma, so as to favour the epithelial mode of development suggested by Robin and Meyer; but in some instances the concentric arrangement of the spindle-shaped cells, described by Steudener, was observed. The view of Virchow, that such tumours are hyperplastic formations owing their origin to increased development of the sand particles, which physiologically are found so frequently on the inner surface of the dura mater and in connexion with the choroid plexuses, seemed to Dr. Collins the most correct as regarded the specimen he exhibited. Apart from its special pathological characters, the tumour was interesting, as only one other specimen of this form of tumour had been brought before the Society two years since by Dr. Yeo, which would be found to differ in not a few respects from that Dr. Collins had detailed.

Cerebral Apoplexy.

Dr. MacSwiney exhibited portion of the brain of a woman, aged 60, in which there was a large clot of semi-fluid blood in the pons Varolii. The arteries forming the circle of Willis were universally atheromatous, and on the superior cerebellar artery was an aneurismal dilatation, the rupture of which had led to the fatal effusion of blood. The occurrence of rupture was indicated by the patient, previously a healthy woman, having a fit, which was succeeded by complete paralysis, eight hours before death. The left ventricle was hypertrophied, and all the cardiac valves diseased. Kidneys not examined.

Pulmonary Gangrene.

Dr. Nixon presented two specimens. The first was an example of the diffused form, engaging the lower portion of the middle lobe of the right lung of a man, aged 24 years, who had been extremely intemperate, and who, shortly before his admission into Hospital, had lain out all one night, drunk. Symptoms of pericarditis, pleural effusion, and pneumo-thorax were developed during life, in addition to those of the local gangrenous condition. On *post mortem* examination the right lower lobe was found carnified, but no pneumonia was anywhere seen. The second case was that of a wine-porter, aged 50, a temperate man, who was admitted on the morning of the 17th December, presenting the physical signs of bronchitis, and died on the evening of the 18th. Three weeks previously he had got wet; this was followed by sore throat, and the formation of an extremely painful swelling on the back of the right wrist. He was restless and delirious at night. The upper lobe of the right lung was, in part, solidified, and contained a circumscribed gangrenous cavity, two of the branches of the pulmonary artery leading to which were occupied by a firm plug. The swelling on the wrist was identical with a charbon, and contained a gangrenous slough, and was considered by Dr. Nixon to be the primary lesion in the case.

Ovarian Tumour.

Dr. Atthill exhibited a mass of tumours engaging the uterine appendages of a woman who had for several months suffered from profuse menorrhagia, and had died with symptoms of pulmonary phthisis. The growth appeared to be mainly made up of cystic sarcoma.

Abdominal and Thoracic Aneurism.

Prof. M'Dowel presented a most interesting, if not unique, specimen of aneurism taken from the body of a man aged 29, who had been ten years in the army, from which service he had been invalided on November 1st, and was admitted into the Whitworth Hospital on December 1st. The man had not had syphilis, nor was he intemperate. The duration of the disease, judging from the inception of the symptoms, was about a year. Pain in the back, at first intermittent, then becoming more constant and extending round to the sides, especially to the left, and, finally, most acute, paroxysmal, and associated with vomiting, was the chief symptom. Obstinate constipation to an extreme degree (a symptom always associated, according to Prof. M'Dowel's observations with abdominal aneurism) was also present. The diagnosis was easily made. Although no pulsatile tumour could be felt, an undulation could be seen in the epigastrium, where there was also an extremely loud systolic murmur audible, which posteriorly was of maximum intensity at the junction of the twelfth rib, with the dorsal vertebra. He was suddenly attacked with intense pain and fainting fits the day before his death, but rallied for the day, eventually dying suddenly. At the *post mortem*, an aneurism of the aorta, two-thirds thoracic and one-third abdominal, was found lying along the vertebral column. The bodies of the tenth, eleventh, and twelfth dorsal and first lumbar were eroded, the intervertebral substances, as usual, being intact. In two places posteriorly the sac of the aneurism was absent. It had very little lateral extension, and did not project much anteriorly. The aneurism had burst into the sheath of the psoas muscle, which it had torn up into shreds and infiltrated with blood. This rupture had presumably occurred the day before the man's death, and a large, diffused, secondary aneurism was thus formed in the sheath of the muscle, which subsequently gave way, at its weakest anatomical point—the upper end—and opened into the cavity of the left pleura, causing instant death. Professor M'Dowel remarked that psoas abscesses occasionally opened in the same way.

Saturday, 9th January, 1875.

HENRY KENNEDY, M.B.,
in the Chair.

Peritonitis—Separation of Portion of Ileum.

Prof. Moore said that the morbid specimens he exhibited were removed from the abdominal cavity of a married woman, æt. 26, who, a week previous to her admission into Hospital (Nov. 28th), had partaken of a large supper of cockles, she and her husband having eaten two quarts between them, next morning she was seized with severe pain in the abdomen and vomiting, which continued till her admission to Hospital. On Nov. 22nd and again on 23rd, she was given an enema, each brought away a little fæces, after which she passed nothing till her death. The vomiting, which had been checked by treatment after admission, returned on Dec. 1st, and on the 3rd became stercoraceous, and continued so until her death on the 5th. *Post mortem* examination.—The visceral and parietal layers of the peritoneum were found to be adherent, but could be separated as far as the centre of the hypogastric region. Here the attempt to separate the great omentum from the abdominal wall opened into a large cavity, full of liquid fæces, which was formed by the pelvis behind and below, agglutinated coils of intestine above and on each side, and the great omentum and abdominal wall in front. All the intestines were glued together by recent lymph, but, except in this cavity, there was no fluid in the peritoneal sac. In this cavity was found a loose, gangrenous piece of small intestine, nine inches in length, attached at the upper and an-

terior portion of the cavity by a few shreds, which broke down the moment it was raised. The large intestine was empty and contracted. Eighteen inches from the cæcum there was found an abnormal thickening of the ileum and two openings in the intestine, through one of which a catheter could be passed upwards into the distended intestine above, and through the other opening into the contracted and empty portion towards the cæcum. A broad band of strangulation was found passing from the under surface of the mesentery to the free edge of the intestine. Prof. Moore remarked that the vomiting was stercoraceous two days before death, but all through there was no suppression or scantiness of urine, or excessive tympany. He believed that the mechanical weight of the impacted cockles, probably 1lb. in weight, had caused a loop of the ileum to fall into the pelvis, where it was strangulated by a band of the mesentery, which led on to the ulceration, and, eventually, detachment.

Cerebro-Meningitis—(Cerebral Fever).

Dr. NIXON exhibited the brain of a boy, æt. 10, who had been healthy up to six weeks before his admission into Hospital, when he was suddenly attacked with pain in the stomach and vomiting. The latter symptom continued; he became weak and emaciated, and complained of occasional headache. The abdomen was boat-shaped, and the cerebral macula well marked. A temporary amendment took place in the lad's condition, but he soon became somnolent, very weak and emaciated, and died. All the organs of the body were healthy except the brain, the entire substance of which was very soft, and the lateral ventricles enormously distended with fluid. The subarachnoid spaces contained large quantities of greenish lymph; the layers of the arachnoid were also adherent, and in places covered by lymph, and the tentorium was intimately attached to the cerebellum. There were no tubercles. Dr. Nixon looked upon the case as one of primary, idiopathic cerebral fever, and corroborative of Trousseau's opinion as to the essential pathology of that disease, consisting in softening of the cerebral substance.

Pulmonary Gangrene.

Dr. HAYDEN exhibited a well-marked example of circumscribed gangrene of the lung, caused by metastatic infarction. A woman, æt. 30, went out three days after her confinement, on Oct. 29th, got cold, and had a rigor that night. About a fortnight after she was admitted into Hospital with a distressing and constant cough; orthopnœa; very great pain in chest, and tumultuous action of heart, with reduplication of its second sound. Large masses of blood subsequently appeared in the sputa; fœtor was detected in the breath, and large crepitant râles in the right base. Acute pain in the left leg followed by œdema supervened. She complained of pain in the uterus, and there was effusion into the left knee-joint. She died of exhaustion on Dec. 24th. *Post mortem:*—The lining membrane of the left femoral artery, for two inches below Poupart's ligament, was hyperæmic. Both pleuræ contained fluid. The heart not fatty, but the liver extremely so and very large. The right lung was firmly attached to the diaphragm, and presented a large, gangrenous abscess, which contained four ounces of matter, and was crossed by numerous fibrous bands. In the tertiary branch of the right pulmonary artery leading to the abscess, was a large, firm plug, most probably formed by an embolus from the uterus.

Cerebral Glioma.

Dr. YEO exhibited for Dr. Gordon, the brain of a female, aged 20, who had been five years under Dr. Gordon's observation, having been the subject of fits of an epileptoid character, which had latterly so increased in frequency and in severity, that she had ten or eleven every night, and had become quite blind and lost her memory. Repeated vomiting and obstinate constipation finally set in, and she died comatose. In the anterior left cerebral hemisphere, engaging the anterior and part of the central lobe, and touching the corpus striatum, but not the optic thalamus, was found a large gliomatous tumour, which well exemplified by the difference in density of its external and central portions, the characteristic features of this variety of the connective tissue group of tumours. In some parts of the tumour there was myxomatous degeneration of it; and again, in other parts, from the presence of large blood vessels, it presented the appearance described by Virchow as Telangiectatic glioma.

SURGICAL SOCIETY OF IRELAND.

Friday, 11th December, 1874.

EDWARD HAMILTON, M.D.,
Vice-President R.C.S.I., in the Chair.

Epitheliomatous Tumour of Parotid Region.

DR. A. H. CORLEY made a communication to the Society on the case of a seafaring man, aged 34, who was admitted into Hospital last November, under Dr. Corley's care. The patient had a large tumour occupying the left parotid region, which he had first noticed in the year 1860. It grew slowly, until within the last three years, when it had increased rapidly in size. The tumour felt hard and dense, and on its surface several blood-vessels ramified. The patient had also fourteen small atheromatous tumours on his scalp, which appeared subsequent to, but were independent of, the parotid one. The parotidean tumour was extirpated, and, greatly to Mr. Corley's surprise, its removal was easy, owing to the fact of its being encapsulated. It extended to a considerable depth, and had very deep relations, but only one small artery required ligature. Neither Steno's duct, the internal carotid artery, nor jugular vein were seen during the operation, nor was the gland itself apparent. The remarkable features of the case were (1), The existence of the tumour without external ulceration; (2), Its distinct separation from the parotid gland; (3), Its being distinctly encysted or encapsulated; and (4), The fact that it had not involved or infiltrated the surrounding tissues. Dr. Corley proceeded to discuss the views of Virchow, Waldeyer, and Woodward as to the origin of the carcinomata and sarcomata. A microscopical examination of the tumour he now exhibited had been made by Professor Purser, who declared it to be an epithelioma. The case would therefore be a strong argument against the epithelial origin of carcinoma, as this tumour undoubtedly arose from some structure other than epithelium; it would appear, therefore, to have had a connective tissue origin, as contended for in the case of these morbid growths by Virchow, and more recently, by Cornil and Ranvier.

Excision of Knee-joint for Bony Ankylosis.

Dr. W. THOMSON read a paper on this subject, based upon a case in which he had performed the operation with success. Having alluded to the unfavourable character of the statistics of the operation when undertaken for the correction of deformity only, Mr. Thomson remarked that the returns were not sufficiently definite; and that what we want is statistics of the operation in cases in which the original disease has actually been recovered from, and in which the surgeon has

interfered with the single object of correcting the acquired angularity. It is obvious that only from such premises can we arrive at a proper estimate of the propriety of the operation at all. Judging from the success which has attended the excision of the knee-joint in its various stages of disease, the removal of a portion of bone from an ankylosed knee would seem, *prima facie*, to be a most hopeful proceeding. Yet, Cooper and Cloquet are represented as declaring it to be "unjustifiable." But the condition of a person so afflicted is sufficiently miserable to make its relief a most fitting object of surgical skill. Of course there are cases in which the flexion is slight enough to enable the patient to compensate for it by apparatus, specially devised for the purpose; but in the more exaggerated instances he is doomed to move about with a crutch or a wooden stump, the leg meanwhile sticking out behind and being a constant source of inconvenience and annoyance. Amputation (the author of the paper proceeded to state) would be at once a radical and unsatisfactory solution of the difficulty. With risks admittedly about equal to those of excision, it would bind the patient to the constant use of an artificial limb, a condition which he thought no one would claim to be comparable to the results attained in most excision cases. We owed it to our American brethren to say that their boldness and ingenuity have contributed most to the surgery of this affection. The names of Barton, Buck, Brainard, and Gross, were all identified with the methods of correcting this deformity. Rhea Barton, of Philadelphia, was, I believe, the first to suggest resection as the proper treatment in true bony ankylosis of the knee. His plan was to make a triangular flap immediately above the condyles, the apex being internal, and the base, measuring two and a-half inches, external. All the soft tissues were divided down to the bone; a wedge-shaped piece was then removed from the shaft of the femur, but not including its whole thickness. The remaining slight band of bone was broken through by increasing the flexion, and the limb straightened. Buck, of New York, modified the operation by removing the wedge from the front of the joint. He first did it in 1853. Brainard, of Chicago, suggested the subcutaneous drilling of the ankylosed joint, and the operation was afterwards successfully performed by Gross. An incision, half an inch long, was made over the internal condyle, and a drill passed through the mass. It was then partly withdrawn and passed in another direction until the parts were completely honeycombed. The remaining connexions were broken up; the limb was placed on a double-inclined plane, and gradually straightened. The patient whose case formed the subject of Mr. Thomson's paper, was admitted to the Richmond Hospital on the 8th of last January. She was a healthy-looking country girl, of good muscular development, aged 21. She did not present any traces of recent illness. Her history was that six months previously she got a severe wetting. In a day or two afterwards she was seized with pain in the left knee, which swelled considerably; she was compelled to go to bed, and had severe rigors. The pain was intense and persistent, and from the first week she was troubled with violent starting in the knee as she was about to fall asleep. No remedies were applied. She simply lay in bed with her knee flexed, as being the most easy position, and remained thus until the acute symptoms had subsided. In four months the startings began to diminish, and they soon ceased. At the end of five months she left her bed, and she then found that the joint was firmly fixed in the bent position. In a month afterwards she came to Hospital in the hope of having some remedial measures adopted. Her general aspect and condition then were as described. The knee did not present externally any appearance whatever of recent severe disease. The integuments were normal in colour and perfectly healthy. There was no thickening, no effusion, no sinus. The limb was, however, bent almost at right angles, and the girl was obliged to move about with a crutch. Closer examination revealed that the deformity did not depend upon muscular contraction or the presence of fibrous bands. By no amount of reasonable force could the hamstring tendons be made tense. The joint was perfectly rigid. The patella was firmly adherent to the femur at the outer side, and there was some displacement of the tibia in the same direction. The case seemed a favourable one for operative interference. The patient was healthy; there was no history of delicacy in her family, and there was good proof of her constitutional powers in her general appearance after having undergone so serious an illness. The operation of excision was performed on the 21st January, Esmarch's method of bloodless surgery being adopted with the most satisfactory results. The incision was U-shaped. The patella was first removed, then a wedge-shaped piece of bone, not, however, including the whole thickness of the ankylosed mass, was cut out, and the thin connecting band which then remained posteriorly was broken through by increasing the flexion. It was found necessary to take away some additional slices, and the limb was then placed upon a simple back splint, extending from the fold of the nates down, with a fixed foot piece. A firm plaster of Paris casing was then applied, care being taken to prevent tilting forwards of the femur by placing a short splint anteriorly. The wound, which was of course not included in the bandage, was then dressed with some slips of lint dipped in carbolic oil. There was no shock from the operation, from which she recovered admirably. On the 24th of February the plaster was removed, and a McIntyre's splint applied in the straight position. In the early part of April a very light scored splint was substituted for the McIntyre, and finally, on the 27th of April, the limb was put up in dextrine bandage. There was then sound and strong union of the bones. The patient could move her leg from side to side, and with a little assistance raise it. On the 29th the patient was enabled to sit up, being the fourteenth week from the operation. She was enabled to move about on crutches early in July; she was then able to stand on the leg, to make her bed, and to get into it without assistance. She left the Hospital on the 31st of August, about six months after her admission, quite well. The shortening of the limb amounted to a little less than two inches, but with a high-heeled boot she was able to move about with ease by the aid of one crutch. Mr. Thomson had since heard of her as enjoying excellent health, and having a useful leg. Mr. Thomson exhibited the portions of bone removed, which formed a wedge-shaped block, and included the whole of the condyles of the femur and a very thin slice of the tibia. It was found necessary to remove so much of the femur in order to bring the limb into proper position. The patella was firmly ankylosed to the outer and lower part of the external condyle, and the displacement of the tibia from the direct line, was manifest. On that portion of the internal condyle which was not in contact with the tibia, some of the articular cartilage remained, but no where else was there a trace of this structure. The semilunar cartilages had altogether disappeared. When the flap was raised there was no sign of synovial membrane, there was not a particle of broken down structure, nor was there anything to show that suppuration had gone on. The bones were perfectly healthy. Mr. Thomson's paper concluded as follows:—"The case seems to me worthy of bringing under the notice of the Society, for various reasons, which I can do little more than enumerate. Operative interference of so serious a character for simple deformity of the knee-joint has been very rarely indeed attempted in this city or country. I am quite alive to the weight to be at-

tached to the hostile judgment of the eminent surgeons whom I have named, founded as it is upon very special experience and powers of observation; but I think the results attained in recent years must modify that judgment considerably. That the operation is one attended with much danger no one will deny; yet it seems to me that the benefits likely to be conferred upon the patient are too great to be withheld, because of the dread of possible misfortune. There are, however, conditions which are essential to the very hope of success, and these no surgeon would fail to look for. Other points of interest in the case are the rapidity with which, regarding the symptoms, the cartilages were affected, the joint was disorganised and repaired, and the probable order in which the parts were attacked. The symptoms of ulceration of the cartilages date from a few days after the wetting was received. Judging from what we now know, it seems probable that even so early this most serious mischief had begun. Again, the whole period during which the patient lay in bed was five months. For a month before she got up the startings had ceased and the swelling had diminished. At the time of removal of the parts, six months afterwards, they are found entirely healed, with sound osseous union. It is a case, too, which serves as a caution against the too common inclination to regard every disease of the knee-joint as depending upon struma. Here there was no degeneration of the bone. The affection was evidently acute synovitis, resulting from ordinary causes—wet and cold. I believe that the membrane becoming intensely inflamed, that the destruction of the cartilage was commenced by its agency; that the membrane itself disappeared in the general ruin; that finally the bones were exposed, granulations were thrown out, and the osseous union between the femur, tibia, and patella, was perfected."

DROGHEDA MEDICAL SOCIETY.

December 5th, 1874.

CLEMENT HAMERTON, F.R.C.S.I.,
President, in the Chair.

Epidemic Metria.

THE PRESIDENT read a most interesting communication on the subject of epidemic metria in connection with the contagion of erysipelas. The first case he detailed was one of a lady (Mrs. A.), aged 30, whose mother, on her way from London to Ireland to be present at her daughter's confinement, began to complain of sore throat (which, upon examination, proved to be diphtheritic, and accompanied by cellulo-cutaneous erysipelas of the neck, maxillary region and side of head), and who occupied with her, previous to her accouchement, the same bed. The mother recovered after the evacuation of deep-seated matter which had formed under the jaw, and during the course of her illness, the daughter was delivered after a favourable labour of six hours. She had previously been of a delicate constitution, and in one of her former labours dislocated her jaw while yawning, subsequent to which she suffered from severe *third stage* hæmorrhage. All went on satisfactorily now until the third day, upon which, after a severe rigor, lasting upwards of an hour, urgent pyrexial symptoms supervened, coupled with abdominal tenderness, and swelling and tumefaction in the left hypogastrium. From this she daily became worse, vomiting, lochial suppression, uterine pain, and all the other concomitant symptoms of metria being most urgent until the seventh day after parturition, and fourth of the fever, when she died. Shortly after, the skin covering abdomen became much discoloured, and patches of a dark hue over other portions of the integument of her sides and back appeared. *En passant* the author remarked that the servant attending Mrs. A.'s mother had to leave for her home in consequence of sore throat. She recovered, but her father was almost immediately attacked with erysipelas of head and face, with inflammation of ankle-joint, and died on the ninth day. The nursetender upon Mrs. A. happened to be the district midwife, and upon the fifth day after Mrs. A.'s confinement, and during the course of the puerperal fever, was called upon to attend a poor woman in her sixth labour, aged 38. Two years ago, this woman had a forceps delivery, owing to powerless labour, and upon this occasion, the same phenomenon occurring, the forceps were likewise resorted to the day following that upon which the nurse took charge. Previous to this pregnancy the woman had laboured under renal dropsy from which she recovered, and before the forceps were applied she complained of severe abdominal tenderness, with a feeble pulse, the countenance being sunken and indicative of prostration. The placenta came away easily, but shortly after rigors and excessive tympanites, with pain, and a feeble, rapid pulse presented themselves, and on the following morning she died. The author drew attention to the immediate exposure in this case, to all the virulence of puerperal contagion, and in the other, to its immediate contact with that of erysipelas. Rapid decomposition here likewise ensued. During the prevalence of this epidemic in the author's district, a woman, on the third day after her fifth labour, having been attended by the same midwife, got epileptiform convulsions. There was neither loss of consciousness nor of sensation, but well-marked "*aura epileptica.*" Pulse small and rapid; abdomen tympanitic and tender, with very audible *gargouillement* and general pyrexia. Turpentine was prescribed both internally and externally, linseed poultices over abdomen, and Dover's powder. Upon the day but one following, a herpetic eruption was observed on the same leg in which, at the commencement, she had complained of severe shooting pain from toe upwards. Each vesicle was about the size of a pea on an inflamed base, extending four inches in a longitudinal direction along the course of the anterior tibial nerve. There were also a few vesicles to be observed on the back of her neck and on eyelid. Next day her leg was greatly inflamed, apparently of an erysipelatous nature, and what were vesicles now became bullæ. From this, however, she gradually improved and finally recovered, the convulsions ceasing and abdominal symptoms disappearing upon the occurrence of the eruption, which seemed *critical*. Mr. Hamerton next drew attention to a case of trismus nascentium which came under his observation about the same period when metria was prevalent in the locality. The subject was a plump and healthy infant, and appeared perfectly well until the third day, when, upon the separation of the cord, it became restless and screamed, and shortly after convulsed, foamed at the mouth and face distorted. For three days and nights it remained in constant convulsions, and hardly ever ceased screaming, the extremities being in a state of tonic rigidity and jaws locked, which any attempt at swallowing increased. Slight bleeding occurred from the umbilicus upon the fourth day, and the next suppuration and swelling about it. The "*risus sardonicus*" was also apparent. Symptoms went on from bad to worse, and child died on ninth day. Mr. Hamerton drew attention to the fact of this rare disease, appearing in his district just at the time when erysipelas and puerperal fever were prevalent, and reviewed the various theories suggested regarding the etiology of the affection. He also dwelt forcibly upon the great practical necessity, on the part of obstetric nursetenders, for their rigidly abstaining from attendance upon infectious diseases, or their proceeding for some time to the bedside of other parturient females after exposure to puerperal poison.

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Original Communications.

ON SUPPRESSION OF URINE,

WITH AN ILLUSTRATIVE CASE.

By T. EVELYN LITTLE, M.D., Dubl.,
Surgeon to Sir Patrick Dun's Hospital.

THE occurrence of total suppression of the urinary secretion is not a common phenomenon, either as a primary affection, or as a complication of any of the diseases ordinarily met with in these climates. Common enough as a frequent, and often fatal event in the course of cholera or yellow fever in the tropics, I believe that perhaps the most usual instances of it which we meet with in these countries are those which arise when an epidemic of the former of these diseases pays us one of its dreaded visitations. To such cases I have no intention of at present alluding. They appear to belong to a special and distinctive category.

As a complication of, or mode of fatal termination in, "Bright's Disease," it is certainly not a common event; though, no doubt, it has sometimes been observed in it, and from an *a priori* point of view we might have here anticipated its more frequent occurrence. On looking over various records of cases of *suppression of urine* on the one hand, and of the occurrence of the more commonly recognized *uræmic symptoms* on the other, I have been struck with the unexpected want of any apparent agreement or correlation between the two. In chronic morbus Brightii, urine may be abundantly secreted throughout the course of the severest intercurrent attack of uræmia. Of this an example is quoted from Liebermeister, by Roberts (*Urinary and Renal Dis.*, p. 418):—"It [the urine] was throughout copious, even during the severest uræmic attacks," and I have myself notes of two cases of fatal uræmic eclampsia, in which the catheter drew off urine in fair quantities during the height of the attack in each instance. Again, on consulting the accounts given of fatal cases of morbus Brightii, we find no law of correspondence between the scanty secretion or suppression of urine and the liability to and fatality of uræmic symptoms, at least no such agreement as could be useful in framing any rule for diagnosis or prognosis. I mean this, too, making full allowance for the obvious fact that the mere quantity of urine excreted cannot be properly looked upon as a test of the efficiency of the performance of the renal excretory function; the observation will be found to apply even when we limit and define our ideas by confining ourselves to the consideration of the quantity of *urea* actually excreted. This is an observation which has always led me to think that in explaining the pathology of uræmic symptoms as ordinarily understood, some additional element beyond the mere non-elimination of urea out of the system is required to make any explanation which may be adopted satisfactory. And this, I believe, is at present the verdict of many modern pathological writers upon the question.

Moreover, the converse of the fact (just mentioned) of the occurrence of uræmia without suppression of urine is even a still commoner matter of observation, viz., the occurrence of total suppression of urine without any of the so-called uræmic symptoms from first to last. If we run through the ten cases of suppression of urine carefully recorded by Dr. Roberts in the work I have just quoted, we find, rather perhaps to our surprise at a first thought, that the absence of uræmic symptoms (as they are ordinarily understood, *i.e.*, headache, uræmic vomiting, uræmic odor, convulsions and coma, and the like class of symptoms) is almost universally predicated of them. A remarkable case, too, of Sir J. Paget's (recorded in the Clinical Society's *Transactions*, Vol. II.), of an old man, who suffered from suppression of urine for thirteen days(!), with only one slight convulsive attack on the last of these days, is an extreme case in point; and the same is true of any other cases, the records of which I have miscellaneously consulted. Cases reported in the London Pathological Society's *Transactions*, by Drs. Nunneley,(1) Fuller,(2) and Bagshaw,(3) may be taken as fairly representative instances, illustrative of this point, as also is a case recorded in the *Proceedings* of the Pathological Society of Dublin, by Dr. Banks,(4) who specially mentions the absence of convulsions or coma. In point of fact, the more characteristic symptoms of ischuria renalis are not at all those of uræmia (employing, that is, this term in its ordinary clinical acceptation): of the former, Dr. Roberts is inclined to look upon the occurrence of general muscular twitchings as the most distinctive and invariable; I should feel disposed rather to regard in this light the extreme restlessness, anxiety, and insomnia, which

(1) *Tr. Path. Soc., Lond.* Vol. XI., p. 145.
(2) *Ibid.* Vol. XIV., p. 192.
(3) *Ibid.* Vol. XVI., p. 176.
(4) *Proc. Path. Soc., Dubl.* Vol. II. (Old Series), p. 208.

always accompany suppression, at any rate in the early stage of its development. In any case, nothing could well be more marked than the contrast of these with those we habitually imply by the term "uræmic symptoms." The contrast becomes the more remarkably shown to us when we have suppression of urine supervening in the advanced stage of Bright's disease, even here, as we sometimes will have, without inducing uræmic convulsions or coma. (*Vide* Roberts, *o.c.*, p. 421). I have been thus particular, in allusion to the negative, as well as the positive, symptoms of suppression of urine, as I know the misconception prevails, and is *a priori* a very natural one, of assuming the symptoms of ischuria renalis to be identical with those of uræmic poisoning (so-called).

In reference to the occurrence of ischuria renalis in the course of Bright's disease, when it does exceptionally supervene, there appear to be some grounds for the idea that this event may, in many of these instances, take its starting point from some more or less accidental exciting cause; such (for example), as the patient's being attacked with some intercurrent acute disease; or receiving some injury; or having been subjected to some injudicious operative procedure; just in the same manner as we see these same, or like accidents occasionally to develop or set going other symptoms (hitherto in abeyance) of this treacherous malady.

Roberts(1) discriminates cases of suppression of urine (*Anuria*, Willis calls it,) into the (1) *non-obstructive*, and the (2) *obstructive;* a classification of considerable practical utility. Cases of the second order—*i.e.*, where the suppression takes place as the final catastrophe of eventual complete occlusion of both ureters—are the commoner of the two, in the proportion of about three to one of a number of cases I have collected; excluding of course, that is to say, those occurring in cholera or yellow fever. I wish to relate the details of a case belonging to the first of them, and one which presented, I think, in the history of its origin and progress, and in the mode of death, a few noteworthy particulars.

Case.—J. C——, a man, aged about 40, a painter by trade, of full and rather leuco-phlegmatic habit of body, came under my care in the month of January, 1874, in the Male Surgical Department of Sir Patrick Dun's Hospital. He confessed to having been an intemperate liver; but never had had syphilis. He sought Hospital relief in consequence of a peculiar and curious condition of his leg. This I shall only now refer to in so far as it seems to bear upon the present aspect of the case. The entire region of the skin and subcutaneous tissue of the right leg and foot had undergone a peculiar process of extreme induration, giving rise to almost complete immobility of the soft parts upon one another, to constriction of the whole girth of the limb, and to contraction of the tissues on the inner aspect of the leg, resulting in a distorted position of the foot, whose attitude precisely simulated that of *talipes varus;* this last circumstance it was which caused the patient his greatest inconvenience, in consequence of his inability to place the sole of the foot upon the ground. On the outer aspect of the leg, an old and indolent ulcer of undefined characters, and of extremely intractable nature, existed. At the time of his first coming under my charge, the surface of the leg was acutely inflamed, presenting a diffuse erysipelatoid blush over its whole area, inducing vesication, scabbing, and desquamation variously in various places. This acute attack of the limb gradually subsided, leaving matters, as to the leg, apparently *in statu quo.* This event, viz., the supervention of an erysipelatoid attack of the indurated parts, is one which the patient described as having frequently occurred before as a part of the previous progress of his case. The first of these attacks which he suffered from took place about twelve months ago, and it was subsequently to this that the induration and deformity of the limb commenced to show itself.(1) The ulcer had first appeared about five months ago; and had resisted various and numerous methods of treatment. After the patient had been some time under observation, and having in the meantime experienced a second and similar erysipelatoid attack of the leg, the ulcer still remaining unhealed and unhealing in spite of plans of treatment frequently altered and modified, a slight puffiness of the face about the eyes was remarked, which suggested, and for the first time led to an examination of the urine. This, to my surprise, I found to present the unmistakable physical signs indicative of chronic renal disease: it was pale coloured, smoky, and of low average density, contained a small quantity of albumen, and a sediment which, though very slight, showed under the microscope granular and degenerative renal tube casts in abundance. During the month of February the patient got cough, and went through an attack of subacute pneumonia, the entire of the lower lobe of the left lung becoming solid. Of this attack—the ordinary symptoms of which were singularly latent, though the physical signs of pulmonary consolidation were extremely well marked—he recovered slowly, and with the occurrence of a

(1) *Opus cit.*, p. 23.

(1) The condition of the leg in this case, I have no hesitation in classing as an instance of a variety of the affection termed "Sclerodermia"—an affection standing in some degree of relationship to Elephantiasis Arabum. It has been observed that, in the history of cases of the kind, intercurrent attacks of erysipelas-like character, just such as have been described as occurring in the case given in the text, form a regular and recognised feature in the progress of the disease. See an exhaustive paper entitled "Sclerodermia, and its Relation to Elephantiasis Arabum," by Dr. Vald. Rasmussen (of Copenhagen), translated in the *Edinburgh Med. Jour.* for 1867.

mild relapse when getting well. After it he remained weak, and never fairly regained strength or appetite. All acute inflammatory reaction in the leg had subsided; but, bearing in view the patient's constitutional state, although he was extremely anxious himself for something to be done to rectify the faulty attitude of the foot, still no very active surgical treatment was deemed judicious. The only measures I did employ consisted of strapping the limb tightly with soap plaster, and the application of a strong wood splint to the outer aspect of the limb, so shaped that by means of a roller, some degree of traction could be applied so as to forcibly abduct the foot. These measures seemed to induce a slight amount of irritation, and were only had recourse to intermittently. They appeared, however, to be productive of some improvement in the foot's attitude.

Matters were progressing in this way, when on the sixth day preceding the death of the patient (March 10th), the presence of a slight degree of general œdema was taken notice of. It was, however, as yet insignificant, and did not give any grounds for urgent anxiety about his state. Two days subsequently alarming symptoms appeared; on the evening of the fourth day before death the patient became feverish and restless (March 12th), and had an attack of severe shivering. On the following morning (March 13th) a slight patch of erysipelas occupied the bridge of the nose, eyelids, and cheeks symmetrically. The œdema had increased—more especially in the lower limbs and loins. He complained of excessive thirst; of dyspnœa, and precordial distress; and was unable to lie down from a feeling of great oppression when in the recumbent posture; he was agitated by a feeling of the intensest anxiety, and was restless to a degree most distressing to witness. The lung-sounds were normal; and the heart, though pulsating rapidly and rather turbulently, presented no abnormal physical sign. The bowels were confined; and the patient said, on inquiry, that he had scarcely passed any water since yesterday. Unfortunately what he had evacuated, since seen the day before, had been thrown out, but it was represented by himself and the nurse as not more in quantity than a wineglassful, and of very high colour.

During the rest of this day, he passed not a single drop of urine. His chief complaints were of orthopnœa, and a sense of incontrollable restlessness. There was no headache, nor sick stomach, nor the slighest drowsiness.

Next day (March 14th), the œdema over the whole body had visibly increased with surprising rapidity; the dyspnœa, orthopnœa, and precordial distress were all exaggerated. The patient had not slept, but continually tossed about the whole night. He had passed no urine since, and none was present in the bladder. Still, there was not the least headache, or drowsiness, or interference with vision. On examining the region of the heart, a peculiar condition was observed: the area of the ordinary precordial dulness was much increased—the space, however, occupying (I thought) a situation rather lower down in the thorax than we usually find it to do in cases of pericardial effusion. On auscultation, I was unable after a most careful and attentive examination to hear anything of either of the cardiac sounds; nor could the hand placed over this region detect any cardiac impulse. One of the most careful and observant of the students of our Hospital class, whom I asked to examine the case independently, confirmed my observations in this particular. Relying upon these physical signs, I ventured to diagnose rapid effusion into the pericardium. This diagnosis was wrong, as the event showed; but I allude to it, as I think the error is not only intelligible in the light of the subsequent *post mortem* examination, but the physical signs which led to it, throw some light upon the mode of death in this case.

The patient died early on the morning of the next day (March 15th), rather suddenly. The immediate cause of death being apparently sudden failure of the heart; stupor having supervened a few hours before. He died without having had any convulsive seizure of any kind. He had not passed any urine whatsoever for, at least, the last forty-eight hours of his life, and the period of suppression may have been several hours longer; and for more than a day before this, urine had become very scanty. The erysipelas of the face had remained localized and limited, and before he died had commenced to subside, with slight vesication. There was never the least urinary odour from the patient's breath or person, at any period of the case.

Autopsy.—The whole body—except the right leg and foot—was extremely and prodigiously œdematous; a considerable amount of ascitic fluid existed in the abdomen. The kidneys were enlarged, the right weighed 6½ oz., the left nearly as much; the cortical tissue was pale, and greasy on section, and the microscope showed a considerable, though not extreme, amount of fatty degeneration. They were quite free from evidences of any acute recent inflammatory action. The infundibula and pelvis of the kidneys, and the ureters were completely devoid of urine. The bladder was closely contracted upon itself, and entirely empty, yielding only a few drops of thick mucus, of alkaline reaction. The lungs were healthy, presenting no detectable traces of the two pneumonic attacks. The pericardium was free from any evidences of inflammation, and did not contain more than the ordinary amount of pale straw-coloured serum. When it (the pericardium), however, was opened, the

heart appeared, as it lay *in situ*, to be of enormous dimensions, thrusting the lungs aside, and accounting, by its large proportions, for the large area of dulness noticed during life. A further examination showed this exaggerated size to be mainly, or almost indeed entirely, due to simple extreme fulness and distension of all its cavities, with great masses of liquid blood, and blood-clot: the latter were defibrinated to a considerable extent in their anterior parts, and slightly adherent to the fleshy walls of the heart; unusually long and tenacious clots—partly of blood-coagulum and partly of fibrin—too, were found passing into the pulmonary artery, and the arch of the aorta, and the branches of these vessels. In the heart, these coagula were present equally on the left as on the right side. No hypertrophy of the heart existed; nor was there any marked or significant vital dilatation of its cavities; its valves were perfectly healthy, and its muscular fibre undegenerated. The heart, with the blood-coagula in it, weighed 16½ ounces. Coloured solution, injected through the renal artery, passed into the minutest ramifications of the vascular system of the kidney with the utmost freedom, injecting it in a most perfect way, and showing this part of its structure to be entirely free from any impediment. On the whole, the renal affection was but little advanced in degree.

Commentary on the Preceding Case.—The case just detailed exhibits in its main features a fairly typical example of the course of events in total suppression of urine, conforming well with the few special particulars briefly alluded to in the precedent observations.

Though the patient had clearly been for some time the victim of chronic fatty degeneration of the kidneys, it is plain that this destructive pathological change had not advanced to a sufficiently extensive degree to have caused death in the ordinary course of the disease; and that we must hence look upon the suppression which killed him, as a circumstance of a more or less accidental nature. As to what may have been the determining cause of this unfortunate accident, the answer to the question must be in this, as in all cases of the kind, difficult and problematic. Can it be that the slight attack of facial erysipelas, which occurred coincidentally with the onset on the suppression, acted as the exciting cause? Or, could the very slight amount of irritation caused by the splinting of the limb have acted in this way?

Looked at as a case of chronic Bright's disease, the two features which are more especially peculiar in the case are:—(1) The extremely sudden development of the dropsy; and (2), the occurrence of suppression of urine. The rapidity with which the dropsy almost visibly extended was quite remarkable and unusual; and I believe that it had much to say to the immediate cause of death. In reference to this point, the condition of the heart—both as evidenced by the *ante mortem* physical signs, and as seen in its *post mortem* appearances—is deserving of note:—it was simply that of a hollow muscular organ paralysed by excessive over-distension; death occurring in this case (I take it) by direct syncope, and not—as in ordinary cases of urœmic poisoning, the contrast to which I have so many times alluded—from cerebral oppression. Whether a similar explanation of the mode of death in other cases of ischuria renalis may hold or no, I am unable to say, but descriptions of the way death has occurred in many of the recorded cases, where particulars are given, show that death "by the heart" is, perhaps, the rule here. Compare, for example, the terms in which we have the immediate casualty recorded in one of the cases I have previously referred to (viz., that of Dr. Fuller). The report says:—The patient "suddenly fell back on his pillow, whilst talking to his wife."

CASE OF HYSTERICAL COMA.

By M. R. RYAN, M.D., M.Ch.,
Meelick, Co. Clare.

Miss ——, a farmer's daughter, æt. 18, left home in her usual health, on Christmas Eve, 1874, with the intention of visiting some friends who resided at a distance. As the evening was cold, she was induced to take about half a glass of whiskey-punch—to which she had been unaccustomed—before starting for the station, a mile and a-half from her home, where she intended taking the train. While about to secure her ticket at the railway-station, she was seized, according to her own account, with something like a feeling of impending danger; and after experiencing sensations of faintness and chilliness, she became unconscious.

In this condition she was, after some delay, conveyed home, and I was hastily summoned.

I found her lying perfectly motionless, her eyes wide open, apparently unconscious of everything that was passing around her, and quite unaffected by every effort that had been made to arouse her.

There was no history of urœmia; the respiration was easy and natural; pupils dilated, but responding readily to light; pulse perfectly normal; head and face cool; extremities cold and rigidly fixed in one position, from which they were with much difficulty changed, and when so changed, they remained in whatever position they were placed; eyeballs staring and motionless. There was no sign of foam or blood upon the mouth, but the jaws were rigidly fixed together, and resisted every effort to separate them. Occasionally there were convulsive movements of the diaphragm and abdominal muscles, as if the

patient were about to vomit, but these did not last long. Having failed in my efforts to arouse her, by slapping the surface, calling to her in a loud voice, &c., I procured some ice-cold water and dashed it suddenly in her face. This had the effect of making her turn her eyes reproachfully at me, and signify her discomfort by shaking her head, and moaning several times. On repeating this measure, however, it failed to have any effect; whereupon, I caused her head to be held over a tub and continued to pour cold water on it assiduously for several minutes, when she began to moan very loudly, placed her hands to her ears to prevent the water entering them, and at length stoutly resisted the continuance of the remedy. Deeming it advisable to allow her some rest, I discontinued the douche, and had her placed comfortably in bed. When I again saw her, after the lapse of fifteen minutes or so, her limbs were relaxed, and she endeavoured to express recognition, but was entirely heedless of my requests to open her mouth and protrude her tongue. I now remarked in her hearing to the friends that it was most important I should see her tongue, and that it was my intention to continue the use of the cold water until she had regained the power of opening her mouth. I then again requested her to show me her tongue, but she only made some endeavour to express by signs that she was unable to do so. Accordingly, I proceeded to use the douche as before, inquiring, at short intervals, whether she was yet able to open her mouth; and very soon I had the satisfaction of seeing her slowly protrude the tongue, which appeared to have been slightly wounded. I persevered with the cold water until I had succeeded in making her answer several questions. I then gave her a respite, and being left alone with her sisters, she began to converse quite rationally, and made inquiries as to the nature of the accident that had occurred to her. She remembered distinctly leaving home, and everything that had happened up to the time she became unconscious; and also declared that she was aware of nearly all that had transpired since she had been conveyed home. Seeing that she was now quite calm and collected, having given some directions to the friends, I took my departure. I was very soon recalled in urgent haste, and found her in the most violent convulsions, which a glance sufficed to show, were in great part voluntary, Her consciousness was intact; and she repeatedly declared her inability to restrain the violent movements of the extremities, which were shaken to and fro with surprising rapidity. The cold douche was again resorted to, and speedily terminated the convulsive movements. She soon became quite calm, and continued to converse cheerfully for some minutes, when she suddenly complained of a feeling of numbness along the spine, and immediately after cried out in alarm that she was paralysed. The extremities were found on examination quite cold, and to all appearances paralytic.

At my request, she made every effort to move her limbs, but without avail. Her respiration now became embarrassed to such an extent, that it was with much difficulty I could convince the friends there was no danger of immediate death. I had once more recourse to the cold affusion, and continued it without interruption, evidently much to the patient's discomfort, till the respiration became quite natural, and she informed me that she was beginning to regain the power of moving her limbs. She soon after declared that the paralysis had left her; but appeared to be in considerable alarm, and besought me, if I felt she was in any danger, not to conceal it from her.

I assured her that the attack from which she suffered was not in the smallest degree dangerous to life, and, happening to have my finger on her wrist while I spoke, I was astonished to observe, that almost immediately after I had given her this assurance, her pulse fell from about 100 to 75 beats per minute.

She now became apparently quite well; but at the urgent desire of the friends, I agreed to remain for some time in the house, in anticipation of her being again attacked. In the space of about an hour, I was again called to her side, and found her suffering from convulsive movements of the limbs, which she seemed to be making the greatest voluntary efforts to restrain. The cold douche, applied as before, quickly restored her composure. I prescribed the following mixture:—

℞.—Tr. assafœtidæ,
Tr. valerian. ammon., āā ℥ss;
Sp. chloroformi, ℥ii;
Mist. camph., ad ℥x.—M.

Half a wineglass every hour until convulsions cease; every fourth hour afterwards.

During the greater part of the night, the convulsions recurred at intervals of about an hour: cold affusion being each time resorted to with immediate relief.

It was worthy of remark that before each attack (which by the way the patient was always able to foretell by certain sensations which she experienced), the pulse became increased in frequency by ten or twelve beats in the minute, remained so during the fit, and returned to the normal standard as soon as the convulsive movements had ceased. At no time did I observe that the eyelids or eyeballs participated in the convulsions; there was no sensation of a "globus" complained of; the patient on no occasion evinced a tendency to give way to tears or laughter; and the conclusion of the attacks was never followed by the expulsion of urine.

Towards morning the convulsive seizures became very much slighter, and less frequent, and subsided quickly of themselves, without the operation of the douche: the patient eventually falling into a quiet sleep.

Next day (Dec. 25th) the patient was quite free from hysterical manifestations, and able to sit up and walk about the greater part of the day; but towards evening some friends coming to see her, and expressing alarm in her presence, at the way in which she had been attacked, the convulsions returned, though not so violently as before. Upon my seeing her, however, and endeavouring to arouse her determination to resist these hysterical paroxysms by remarking that they would certainly have the effect of making her look ridiculous in the eyes of her friends and the public, she at once resumed her natural calm cheerfulness, and has continued quite well up to the present (Jan. 3, 1875.)

As she presented a good deal of anæmia and had menstruated scantily, I ordered her gutt 20 tinct. ferri. perchlor., three times a day; and pil. aloes et assafœtidæ, gr. v, every second or third night, which she has been since taking. In addition she takes bromide of potassium, gr. xii, in a draught, morning and evening.

Remarks.—Doubtless such cases as the above are too common in the experience of most practitioners to attract any special attention; but to my mind, the present case presents several features not unworthy the notice of the profession.

On inquiry, I learned that this was the first manifestation of hysteria the patient had ever exhibited; and I have no hesitation in regarding the unusual stimulation of the whiskey-punch, mentioned in the report, acting in conjunction with the excitement of mind consequent on her eagerness to catch the train, as the exciting cause of the attack.

And here I would remark that this appears to me to be one of the many examples which should suggest great reserve in allowing alcoholic stimulants, in any form, to hysterical subjects. Readers of the foregoing report might, perhaps, be inclined to suspect that, more or less, malingering entered into the attack; but from my previous knowledge of the patient's character, as well as from other considerations, I am quite satisfied that such was not the case. In further proof of this, I was led to remark a circumstance which I think is unusual in hysterical cases; viz., that the patient seemed to be rather averse to, than to court sympathy.

A striking point about the case was the entire absence of many symptoms, which are said, and I believe with truth, to be highly characteristic of hysterical seizures; such as convulsive movements of the eyelids and eyeballs, a disposition to give way to tears and laughter, the phenomenon of the *globus hystericus*, and the expulsion of large quantities of limpid urine at the termination of the paroxysm. It is certain, however, that none of these symptoms were present at any period of the case; and yet from the beginning there was no room for doubt as to the nature of the attack. In a case like the present, otherwise well-marked, the deficiency of the phenomena referred to could not be of much consequence in a diagnostic point of view; but, undoubtedly, their absence under circumstances of more uncertainty would be liable to create embarrassment. It is a noteworthy fact, that more or less of the phenomenon of *catalepsy* was conjoined, in this case, with hysteria; for, as will be seen from the report, while the patient remained comatose, the extremities remained rigidly fixed in the manner characteristic of the former condition. This goes to prove, I think, that catalepsy is more justly regarded as one of the many and varying concomitants of the hysterical state, than as a distinct affection. It is not often, I believe, that patients are observed to retain, as in this case, full possession of their faculties during a convulsive paroxysm.

In the present unsatisfactory state of knowledge, with regard to the so-called "functional affections" of the nervous system, it would be unprofitable to discuss the intimate nature of hysteria; but that a *defective power of will* to control morbid reflex excitability is largely involved in the matter cannot be doubted; and I believe it is by arousing the dormant nervous energy, and "bracing up," as it were, the centrifugal system of nerves, and thus enabling them to convey more vigorously the mandates of the mind, that the cold douche acts so efficaciously.

With regard to the remedies for hysteria: where promptness of action is required, as when a patient is experiencing a succession of convulsive attacks, I should be disposed to rely most on assafœtida and valerian, but where a permanent effect is sought for, there is no medicine, I am inclined to think, so successful as the bromide of potassium, when continued for weeks and months, in combating the hysterical condition.

Clinical Lectures.

ON DISEASES OF THE HEART AND ITS GREAT VESSELS.

CASES OF IDIOPATHIC AND RHEUMATIC PERICARDITIS, WITH PLEURAL EFFUSION.

By WILLIAM MOORE, M.D., Dubl.,
King's Professor of the Practice of Medicine; Physician to Sir P. Dun's Hospital, and to the Institution for Diseases of Children, &c.

Gentlemen—The case of the young man, Mc——, is one of considerable interest in many respects. In the first place, I have often told you that if you take all the cases of pericarditis

you meet with, in ninety per cent. they would be complicated with rheumatism. Now, here is a young man with not only pericarditis, but also right pleural effusion; and, as far as we see in this case, the inflammation of the pericardium has no connection whatever with rheumatism, so that this may be called a case of idiopathic pericarditis and pleuritis combined. I have said, that this is a case of pericarditis unassociated with rheumatism or with any diathetic disease, such as Bright's disease of the kidney or pyæmia, and hence this case is a comparative anomaly. I can hardly recall a case of acute sthenic pericarditis that has not been associated with acute rheumatism or scarlatina. Here is the case of a lad, aged 18 years; his father and mother are healthy; he is a plumber by trade. You might say that his occupation might point to some arthritic condition, as it is not uncommon to see rheumatic and neuralgic affections associated with lead poisoning; but here we have no blue line around the gums, or signs of lead poisoning anywhere. I still come back to the fact, therefore, that this is a case of idiopathic pericarditis with pleuritic effusion. He tells us that he was suddenly seized with a violent pain at the base of his right side, under his right breast, and that this pain "caught" his respiration to such an extent that he could scarcely breathe. Afterwards he was seized with a pain which he locates about the junction of the second and third ribs with the sternum on the left side, and he still makes a complaint of a sharp pain about the left nipple. His respiration is 42 in a minute, and his pulse is 104; his evening temperature 102°. You observe he is lying with the head slightly raised, and he is generally turned towards the right side. Now there is a great deal of significance in this position; in fact, he is lying in the position best calculated to relieve as far as possible his right lung from the pressure of the fluid. When you look at his chest, you are struck with the placid condition of the whole anterior part of the chest, with the increased convexity of the right side, and you see that the right nipple is divaricated from the mesial line more than it should be. You also see some prominence over the precordial region, but it is comparatively slight, and you may remark the almost total invisibility of the apex beat of the heart. If you percuss over the front of the chest on the right side, which is comparatively convex, there is clearness at the top of this side, but a little further down, at about the right mammary region, you come upon absolute dulness; and when you follow the area of dulness round to the spine, percussion gives as dull a sound as it well can do. When you cross the mesian line, and percuss over the precordium, you see that there is dulness all over that region, whilst the rest of the left side is resonant. The respiration over the left lung generally is clear. The dulness over the precordial region is of a triangular character, apex above and base below; at the outer margin of this triangle you come upon complete resonance on percussion, which extends round to the spine, thus proving that on the left side you have no pleural effusion. When you place the patient in the upright position, you are still more struck with the convexity and placidity of the right side, and when you percuss this side from the scapular ridge downward, there is remarkable dulness on percussion, with an absence of vocal vibration. He has a short, dry cough, sometimes associated with frothy expectoration. The urine is scanty and of a high colour: its specific gravity is 1·022, and it has an acid reaction, but contains no albumen.

Now in this case, you have two serous membranes in the second stages of inflammation. I will first take the pericardium. There is still, as I have already said, some prominence over the precordial region, and there is remarkable dulness on percussion, and a deficiency of vocal vibration and of respiration over this region. When you place the stethoscope over the base of the heart, you come at once on a physical sign, the most important we have, of the presence of pericarditis, namely, friction sound. You have a double friction sound over the base of this boy's heart, and this friction sound can be heard as far down as the level of the left nipple; but if you listen attentively, you will find that towards the apex the two sounds of the heart are distinct, with no attendant endocardial murmur, as far as I can determine. This friction sound is a double sound—a to and fro sound—and requires your undivided attention, for it might mask endocardial murmurs, accompanying the sounds of the heart. The dulness extends as I have said downwards as far as the diaphragm, and you can scarcely perceive the apex beat of the heart. Now, my reading of this case is, that this lad has pericardial effusion to such an extent, as to shut out the apex beat of the heart from us, and, in addition, a great deal of plastic lymph is effused about the base of the heart.

These are the most prominent symptoms and physical signs of the pericarditis in this case; but you have still more to observe, for on the opposite side, you see increased convexity, with bulging to a certain extent of his intercostal spaces. You have dulness on percussion, with virtual absence of vocal vibration. You have not complete absence of respiration, but the respiration is feeble and distant, and associated with a fine crepitus. Now you might think that this crepitus was evidence of a pneumonic complication; but I take quite another reading of it. In the first place, the dulness is far more absolute than the dulness of pneu-

monia. Pneumonia would not give rise to the increased convexity of the side which you see, and it would give rise to an intensified form of vocal vibration, and you would have the presence of bronchial respiration. But in this case you have the increased convexity of the side, the most marked dulness on percussion, the absence of vocal vibration, and distant feeble respiration, accompanied with a crepitus or fine bubble, and as you descend, you see that this crepitus increases, and strikes you as being better defined. As to the significance of the physical sign of crepitus in this case, my idea is that there is a sort of endosmotic process going on, the pleural fluid is percolating, and making its way into the bronchi, and the air acting on this fluid that is lodged in the bronchial tubes gives rise to muco-crepitus. If it were a pneumonic crepitus, you would have the expectoration of a different character; in this case it is a frothy mucus, which you are aware is quite different from the rusty-coloured, tenacious sputa of pneumonia. It is precisely the kind of expectoration that you see where this sort of endosmotic process is going on in cases of pleurisy, where the fluid is thus silently and vicariously making its way into the bronchi. For all these reasons, we conclude, that this boy has right pleural along with pericardial effusion. Another important point to be borne in mind is, that if this lad had pneumonia of his right lung, in all probability his temperature would have ranged a great deal higher than it has done. The highest temperature in this case, as far as we can learn, has been 102°.

This patient's case puts me in mind of a somewhat similar one, which a great many of you had an opportunity of seeing. It was that of a gentleman with simultaneously severe pericarditis and left pleural effusion. In the case I refer to, that of Mr. F——, aged 26, there were some striking differences, which it may be well to mention to you. He had very acute articular rheumatism, and—mark this, for the notes of the case were very carefully taken for me by Mr. Forsythe—on the seventh day of the rheumatic fever a distinct friction sound was developed. This I regard as an important clinical point. I have over and over told you, in cases of acute rheumatism, the value of looking to the date of the accession of the physical signs of cardiac complications, such as endocardial murmurs and friction sounds. I told you that you may look out for evidence of organic complications in connection with rheumatism early in the disease. A friction sound was developed on the seventh day of the fever, and within twenty-four hours the pericardium was filled with fluid. Such was the condition of this patient when he was transferred to my care from that of my colleague, Dr. Aquilla Smith.

In Mr. F——'s case we had very remarkable prominence of the precordial region and of the left side of the sternum, absence of respiration and vocal vibration over the precordial region, orthopnœa, and all the unequivocal signs of the presence of a great quantity of fluid in the pericardium. Again, the dulness did not stop at the left outer pericardial triangular line; on the contrary, all around to the spine it was intensely dull, and he had convexity of the side, obliteration of the intercostal spaces, and total absence of respiration; in short, all the physical signs were present on the left side, which McN—— has on the right, but more pronounced. Owing to the great amount of fluid effused the friction sound disappeared, but another physical sign was developed, viz., a basic systolic murmur, and the question arose, what was its origin? The patient was not a specially blanched or spanæmic looking young man, and hence we would not have expected an hæmic murmur to be developed so early as the ninth or tenth day of acute rheumatism. To what other source could its origin be referred? I think that from the great amount of fluid and distension of the pericardium, that the orifice of the great vessels about the base of the heart, especially of the aorta, were mechanically pressed upon and temporarily constricted, and hence the basic systolic murmur which disappeared *pari passu* with the removal of the fluid. This I consider to be the most rational explanation of these basic murmurs in pericarditis with copious effusion; at the same time I admit that spanæmia may lend a hand in their production in a great many instances.

Now, gentlemen, what was the result of this case? This gentleman was put on iodide of potassium in the first instance, afterwards on syrup of the iodide of iron, small blisters were repeated over the precordial region and base of left side, which regions were afterwards painted with strong tincture of iodine; his diet being beef-tea and wine. We watched the case from day to day as the fluid disappeared from the pericardium. There was a return of the friction sound, but eventually a total disappearance, both of the friction and basic systolic murmurs before he left the Hospital.

(To be continued.)

Reviews.

Dental Pathology and Surgery. By S. James A. Salter, M.B., F.R.S., Etc., Etc. London, 1874. Longmans, Green and Co.: pp. 394.

The book before us purports to be a digest of certain papers that have been published by its author from time to time during the last three and twenty years, and which have appeared before the profession through the Reports of Societies' Transactions and Journals. We cannot better convey to our readers Mr. Salter's inten-

tion in compiling this volume than by quoting an extract from his preface :—"It has appeared to me that even eminent Hospital Surgeons were scarcely aware how serious are some of the maladies directly dependent on tooth-disease, and how largely the pathology of the teeth is associated with serious morbid changes in contiguous structures. The fairness of these remarks may be briefly illustrated by saying that 'warty teeth' had been mistaken for exostoses of the jaw; that dentigerous cysts had scarcely been recognized, and that the external orifice of an outward pointing alveolar abscess dependent on a carious tooth, was still constantly attributed to necrosed bone. These are a few examples of a general imperfection of knowledge among Surgeons. On the other hand, the pathology of the teeth themselves was very imperfectly investigated by Dentists. The many morbid changes which occur in the tooth-pulp, were either undescribed or but imperfectly known. The same may be said of the series of tumours of the hard tissues of the teeth, now grouped together under the title 'odontomes.' And many more instances of the like kind might be enumerated. It appeared to me that there was a considerable field of Surgery and Pathology—a sort of debatable ground—between that occupied by the Surgeon and the dentist which was open to further research, and which would repay the labour of investigation."

The first chapter invites us to a consideration of the general and minute anatomy of the teeth; the latter treated with all the earnestness which we should expect from so zealous and accomplished a histologist. "Caries," "Congenital Defects," "Mechanical Injuries," and "Necrosis," receive in subsequent pages their due share of attention. In chapters XI and XII our author, if he may not be said to have broken fresh ground, has, at all events, followed up the initiatory labours of others with valuable confirmatory testimony. The chapters on "Odontomes" and "Diseases of the Tooth pulp," are of themselves sufficient to recommend this volume to the earnest study and grateful appreciation of all practitioners in Dental Surgery. From his chapter on Phosphorus disease—a subject upon which Mr. Salter speaks with some authority—we cannot forbear quoting the paragraph in which he alludes to the preventive measures which ought to be adopted with regard to this terrible affection. "The prevention, however, of phosphorus disease is so easily accomplished, that its occurrence is discreditable to the Sanitary Laws of any country where it occurs. If the employment of amorphous phosphorus were decreed, and the use of ordinary phosphorus prohibited by Statute, the disease, in all probability, would cease to exist. But if this could not be enforced, the employment of ordinary phosphorus might be rendered almost innocuous." Amongst other precautionary measures he enjoins "a periodic and rigid scrutiny of the mouths of all the workpeople employed." He regards the disease as local—dental caries "a necessary pre-existing condition" —the subjacent periosteum being affected through the exposed tooth-pulp (p. 280). It would be impossible within the limited space at our disposal to do adequate justice to the merits of a work which represents a condensation of the thought and labour of so many years. We think, however, that we may safely assert that in the volume before us, Mr. Salter has ably redeemed the expectations implied in his preface, and has given to Surgical literature a most acceptable contribution. In concluding this notice, we would suggest to our Surgical readers the perusal of those portions of the work which treat of "Nervous Affections from Tooth Disease," "Jaw Necrosis and Phosphorus Disease;" while to practitioners in Dental Surgery we offer our congratulations that they have here placed before them the experience of so well-qualified an explorer in those fields of investigation in which it is their lot to labour.

Outlines of Zoology and Comparative Anatomy. By MONTGOMERY A. WARD, M.B., Univ. Dub., F.R.C.S.I. Fannin and Co., 41 Grafton street, Dublin: pp. 150.

Multum in parvo we may well say of these Outlines; for it would be difficult to get more information on the subject into so small a bulk.

The author lays no claim to originality, but his arrangement of the subjects treated is at all events the work of his own brains. The plan of the work is as admirable as is the classification which forms so prominent a part of its pages. No student can ever expect to acquire much knowledge of Zoology who has not clear ideas on this important subject; and in no other one work that we know of will he find it more usefully and more authoritatively set forth than in Mr. Ward's compendium.

A large number of classical derivations are given, and we are glad to see the Greek printed in the original; but technicalities are too little explained to justify us in recommending this Manual to a beginner. To those who have from other sources acquired some knowledge of Zoology, especially those contemplating the ordeal of a public examination, we strongly recommend the work. With a full knowledge of the reliable facts which it contains, the student could scarcely fail to pass a creditable examination; at the same time, we could not advise any one reading for such, to limit his studies to a compendium which the author admits to be only an arrangement and condensation of the leading features of the science.

The Art and Science of Medicine. By W. HOWSHIP DICKINSON, M.D. London: Longmans, Green and Co., 1874 : pp. 40.

THE above is the title of an Introductory Address delivered at the opening of the present session at St. George's Hospital, by Dr. Dickinson, which has been printed at the request of the resident Medical Officers and Students of the Hospital, and is issued in an extremely elegant form by the above-mentioned eminent publishing firm.

The address is a well-written and interesting one, and deals in an instructive manner with the modes in which the science of medicine has advanced from primeval times until within the last hundred years, when, simultaneously with the development of chemical and physical science, such advances have been made in it as must be held to transcend those of the entire preceding epochs.

Transactions of the American Ophthalmological Society. Ninth Annual Meeting. Newport, July, 1873. New York: W. Wood and Co., 1873.

THIS society is doing sterling work, and its transactions form a most valuable contribution to ophthalmological literature.

We cannot but look upon it as a matter of no small reproach that our American *confréres*, considerably our juniors in ophthalmology, should nevertheless have far outstripped us. This we feel sure is partly accounted for by the fact that we have no special society like the above. Societies like this are of immense benefit; they stimulate to work, which would otherwise never be performed, and they keep alive, both by the interchange of ideas and the social element, which necessarily pervades them, that good fellowship and sympathy, without which it is impossible for those who are working together for a common cause to accomplish anything like adequate results.

There are some extremely interesting and suggestive papers in the present collection, which fully sustain the high character our American brethren have justly acquired in this important branch of medical science.

The first paper, by Dr. Wadsworth, of Boston, is on

A case of intra-ocular glioma, in which the disease remained latent for twenty months after perforation of the cornea. The subject of it was a boy, aged 2 years and 11 months, whose mother stated that when he was fourteen months old he had a violent inflammation in the left eye, the cornea perforated, and the eye was destroyed. Excepting this, however, and some slight passing attacks of inflammation, the eye had remained quiet until shortly before Dr. Wadsworth saw it; it had then become reddened, painful and prominent, the child refused food, slept little, and was rapidly losing flesh and strength. The eye presented the appearances of panophthalmitis, and taken in conjunction with the constitutional symptoms, such was the diagnosis made. To relieve the pain and diminish the tension, it was decided to make an incision into the globe, which was accordingly done. "The feel on cutting was that of a solid body, and nothing escaped from the wound." The presence of a tumour was now suspected, and enucleation at once proposed. This was performed two days later. A tumour was found posterior to the globe and attached to it; the extra-ocular portion "seemed nearly as large as the bulb itself."

All went well for the first eight or nine days, when he had headache, anorexia, nausea, and vomiting. At the same time there seemed to be some evidence of the reappearance of the tumour in the orbit. Somewhat later it was remarked that the sight of the right eye was becoming dim, and that the pupil was dilated, "as in paralysis of the sphincter, and reacted very little to light;" the vision was greatly impaired, and some days later it is noted, "the right pupil was large and immovable, and vision wanting entirely." Nothing abnormal, however, could be detected with the ophthalmoscope.

The symptoms continued with little or no abatement, the tumour in the orbit increased rapidly, and the patient "gradually failed and died," a little more than two months from the time Dr. Wadsworth first saw him. It is a remarkable fact that some days before he died the right pupil returned to the normal size, and "reacted well to light, and the boy said he could see again; but on testing him with a lamp, there was apparently no perception of light."

The microscopic examination proved that the tumour was a glioma, the normal intra-ocular tissues had entirely disappeared, excepting a few cells in the degenerated part, which looked like choroidal cells. From a consideration of the clinical history, and the condition of the contents of the globe, as revealed by the microscope, Dr. Wadsworth concludes that there can scarcely be "a doubt that the inflammation which occurred when the child was fourteen months old was excited by a previously existing intra-ocular tumour, and that the growth did not arise accordingly after the eye had been lost."

Dr. Wadsworth states that "the length of time the period of atrophy of the globe and lasting of the disease continued, is nearly double that in any hitherto published case;" as already stated, twenty months elapsed from the date of the perforation before the eye began to protrude.

Another interesting point in connection with the case was the curious behaviour of the iris in the right eye. First, the dilatation with little or no response to light, vision being quite wanting; then, though the vision did not return, and the boy's condition grew worse, "the pupil for some days before his death returned to its normal size, and reacted to the stimulus of light." As Dr. Wadsworth says the loss of sight may be easily explained by the extension of the disease along the left optic nerve to the chiasma, but the return of the reflex action in the iris "seems wholly inexplicable." An autopsy was not allowed.

Dr. Joy Jeffries records *two cases of intra-ocular tumour;* in both cases the tumours were found to be sarcomatous.

Dr. Noyes reports an interesting case of *cancerous ulceration of the surface of the globe.* The patient was a young lady, æt. 16. The disease commenced fifteen months before Dr. Noyes saw her, as a small red spot immediately below the cornea; this developed into a pimple, which had broken on three occasions and given issue to a thin discharge; it never caused pain, photophobia, or general inflammation of the eye. When seen by Dr. Noyes it presented the appearance of an irregular and deep ulcer, occupying "the inner and lower part of the sclera and cornea, nearly to its middle." Its edges were raised, its surface warty, and a thin fluid oozed from it. The colour of the surface was grey and translucent. There was no tendency to hæmorrhage; the ophthalmoscope discovered nothing abnormal in the fundus of the eye. There was an enlarged gland under and in front of the angle of the jaw. The patient's health was decidedly depreciated. Enucleation was proposed, but refused. The patient died three months afterwards from exhaustion. Very little change had taken place in the tumour, but the gland under the jaw had continued to enlarge. An autopsy was not permitted.

Dr. Knapp gives a *Report of* 114 *extractions of cataract,* which is full of practical interest. There is an air of thorough honesty pervading this report which is most refreshing. The author states that the *results* he has obtained are less favourable than those he had in Europe, and he considers this due to his having had a greater percentage of unfavourable cases to deal with in America. "Of the 114 eyes," he says, "*I have lost* 13, which is more than twice as many as I lost in Heidelberg. Among the losses I have included all cases that could not count fingers at the distance of a foot. Some of them would probably gain useful sight by an after-operation; but in preparing statistics we have to note things as they actually are, not what they are capable of being." In this series of 114 extractions he had to perform 15 after-operations, which, he states, is less than he used to perform formerly. He accounts for this by the fact that he endeavours, after opening the capsule, to remove the central portion, and this he generally succeeds in accomplishing. The after-operations consisted principally of discissions, but in two cases he tried what he terms "angular iridotomy," an operation similar to that originally proposed by Maunoir, and lately revived by Wecker. Both cases proved disastrous, and he decided never to try this operation again.

Dr. Derby contributes a most suggestive paper, *On the importance of an accurate Record of all operations for cataract, and the results of the same, with some practical suggestions.* After alluding to the unsettled state of the question, as to which is the best operation for cataract, a question which must eventually be settled "by the logic of facts and figures," the author proceeds to show that little or nothing has yet been done in England and America towards its solution.(1) "To urge the systematic and accurate attainment of the same, by means of concerted action, is the object of this paper." In his opinion, "it is the duty of every surgeon who undertakes the removal of a cataract to record the facts in the case, and to take the trouble to ascertain the amount of vision that the patient ultimately acquires." The author gives a very complete method of registering cataract cases, and concludes with some admirable suggestions, which he hopes may "be found worthy of being brought forward at the meeting of the Ophthalmological Congress in 1876, for concerted action."

Dr. Green makes some *Remarks on cataract extraction,* with *suggestions for securing greater precision in reporting operations and results,* especially with refe-

(1) Exception should be made in favour of Dr. Knapp's valuable returns, as well as those furnished by the Boston Infirmary

rence to the *form of the corneal section*. To record the form, extent, and position of the corneal section, the character of the iridectomy, and the ultimate form and condition of the pupil, the author proposes the use of simple diagrams, which possess "the very great advantage of showing these details of the operation and result as they have appeared to the eye of the operator, and so supplementing and correcting defects and inaccuracies of statement. Such diagrams are best drawn upon engraved blank forms, which may be printed in any light colour, and gummed on the back like a postage stamp, for insertion in the case-book. The forms which have suggested themselves to me as most useful are three in number, namely, a front and a profile view of the cornea, and a front view of the iris."

This seems a good practical suggestion, and might serve as a useful addition to the form of recording cases proposed by Dr. Derby in the preceding paper.

Dr. Loring takes up the cudgels in defence of a theory he propounded in a paper, read before this Society in 1870, regarding *The light-streak in the centre of the retinal vessels.*(1) Professor Nagle, in the 1st Vol. of his *Year-book*, has characterized Dr. Loring's paper as a "tissue of physical impossibilities," and alleges that "the appearances claimed to have been observed were as foundationless as the arguments based upon them." Dr. Loring replies: "to this very forcible, if not very courteous criticism, I have nothing to say, except that if the learned Professor did not get the effect exactly as it is described in the paper referred to, he could not have performed the experiment in a proper manner; as not only were the appearances "claimed to have been observed" seen by all the members present, but the experiment has since been repeated by many other competent observers, with always the same result." [The writer of this review has performed the experiment, and exhibited the same at the Biological Club; he can testify to the fact that if it is performed in the manner described by the author, the "appearances claimed to have been observed" cannot fail to be seen.]

Dr. Loring deals at some length with the elaborate objections put forward by Dr. Schneller. Dr. Knapp, in a recent notice, says:—"Schneller's experiments and statements are, in part at least, as far as can be judged without repeating them, correctly refuted by Loring."

In concluding this survey of the principal papers in these transactions, it should be stated, that the publishing committee, consisting of Drs. Roosa, Loring, and Noyes, deserve all praise for the manner in which they have accomplished their task.

C. E. FITZGERALD.

Correspondence.

BERLIN.

FROM OUR OWN CORRESPONDENT.

Virchow on the Growth of Bone—Subcutaneous Injection of Carbolic Acid in Erysipelas—The Surgical Treatment of Cavities in the Lungs.

SINCE I last wrote there have been no changes in our Medical world of any general interest, nor has any event occurred worthy to be chronicled. I hope you will therefore make allowance for me, if in lieu thereof I to-day give you an abstract of a dissertation on the growth of bone, lately made by Virchow before the Academy of Medicine. For though we have often had the opportunity of hearing our celebrated anatomist speak on general subjects, still it is but seldom that he has lately favoured us with a lecture on a purely medico-scientific question.

(1) *Archives of Ophthalmology and Otology*, II. I., pp. 95-106.

Of late years, as you well know, the members of the profession have been divided into two great parties on this subject; one holding what is called the "apposition" theory, viz., that bone grows by the resorption of the more central portions and the deposit of new bone tissue on the periphery; the other party considering that the bone structure as first formed is persistent, and that growth takes place by the "interstitial" deposit of new bone substance. The latter party bring forward in support of their view the fact that, from the very first, the arrangement of the bone lamellæ is peculiar, and that their direction, as has been shown by F. Myer, of Zurich, corresponds exactly to that which is chosen by engineers for the beams used in the construction of works, such as scaffolding or windlasses, which are intended for the support or raising of great weights.

Virchow, while fully allowing the strength of this argument from the mechanism of bone, is compelled by his great pathologieal experience, and by the experiments that he has made, to give his decision in favour of the "apposition" theory; considering that bone tissue is not persistent, but is subject, like all other tissues, to a continual process of transformation and repair. He at the same time draws attention to the fact that his investigations in this direction (the best known of which are probably those on Rachitis) are entirely corroborated by subsequent authors.

During the lecture a number of preparations were exhibited by his former assistant, Dr. Wegener, which demonstrated beautifully how pieces of wire, or small pegs and plates of ivory, when inserted into a growing bone, gradually passed, or more properly were forced, from the periphery into the medullary canal.

I will now give you a short account of some observations which have been lately made at our clinique.

Carbolic acid having proved so successful in the hands of surgeons in the treatment of septic or inflammatory symptoms, whose origin could be traced to the presence of some contagium vivum, the idea soon arose of trying what would be its effect in a disease, the contagious nature of which is becoming daily more recognized, viz., erysipelas. As this remedy, when applied to the skin, has but little tendency to affect the deeper structures, the mere external application of it did not seem to promise much result, and this led at once to the idea of its sub-cutaneous injection.

The first person who carried out this idea was Dr. Wilde, of Plauen, the preparation used by him being a solution of sulpho-carbolate of soda. Somewhat later, Aufrecht and Hueter(1) tried injections of a solution of pure carbolic acid, which the latter recommends most highly. According to them from two to three injections of 0·02 gram. of carbolic acid made at the margin of the erysipelatous patch, were sufficient to arrest entirely the further spread of the disease, without causing any pain or giving rise to any symptoms of intoxication. Hueter thought that erysipelas was caused by the presence of monads in the skin, that its spread was a consequence of their becoming more dispersed, and that the injection of carbolic acid arrested the disease by killing these monads.

Of course the hope of arresting a disease, with such a tendency to spread superficially as erysipelas, by means of one or two injections, the effect of which must necessarily remain localized, was *a priori* but faint. However, as it was so highly recommended by Aufrecht(2) we thought it but our duty to give it a fair trial, he being less biassed by theories about micrococcen, bacterien, and such like, than Hueter.

We therefore treated five cases of erysipelas of the head, neck, and back, in this way. In each of these cases the tendency to spread was well-marked. From

(1) *Vide* IRISH HOSPITAL GAZETTE, Vol. II., p. 107.
(2) *Loco cit.*

0·07 to 1·4 gram. of carbolic acid, dissolved in water, was injected within a period of from two to three days, from two to nine injections being made along the margin of the disease at each sitting. In no case did we observe the least disappearance or arrest of the disease. Several of the patients suffered from the formation of abscesses at the seat of the injections. The formation of these abscesses did not seem to depend on the strength of the solution used; for they occurred as often in those cases where the quantity of carbolic acid injected was very small (0·01 gram.) as in those where a large quantity (0·1 gram.) was employed. In many cases the patients were confined to their bed by these abscesses long after the original disease had run its course. In some cases the erysipelas seemed to creep out in the space left between two injections. In others, especially where the disease attacked the back and showed much tendency to spread, it seemed to take no notice of the points of injection, but ran its ordinary course quite undisturbed. In some of these cases the disease had its starting-point from ozæna narium; in others no local cause for its origin could be assigned. With such results we had no desire to continue the experiments any longer, but reverted to our old treatment, which consists in painting the part affected with collodion and treating symptoms as they arise.

It is hardly necessary to remark, that in the case of a disease which runs such a typical course as erysipelas, the fact that a few cases turn out satisfactorily when treated according to any given method, proves nothing. To be of any significance the number of cases experimented on must be large, and the results must be invariable. Now erysipelas if allowed to run its course undisturbed remains only from two to three days in the same part of the body. In a case therefore where we try the treatment by injection, and where the disease which was present to-day has disappeared to-morrow, it must always be most difficult to determine how far this is due to the typical nature of the disease, and whether it would not have occurred just as soon if no injections had been made.

It is an interesting fact, that such large doses of carbolic acid (1·4 gram. within a space of two days) should not give rise to any symptoms of intoxication. The pulse and temperature were both unaffected, though in the experiments that have been made on dogs, it has been noticed that the pulse got slower. In only two of our cases was the typical carbolic acid urine observed.

At page 368, Vol. II., of the 23rd number of the IRISH HOSPITAL GAZETTE, is a short notice of the views put forward by Dr. Pepper on the treatment of cavities in the lungs, by injecting them with a solution of iodine, I now beg to draw your attention to a short paper by Dr. Koch, in the *Berlin. Klin. Wochenschrift*, 1874, No. 16, which is entitled "The History of the Surgical Treatment of Cavities in the Lungs." In it Dr. Koch shows that the topical treatment of lung cavities was familiar to Hippocrates, and that from his time down to the present, there has been an unbroken chain of authors on this subject, the latest among whom are Storks, Mosler, and Pepper.

Dr. Koch rightly questions the possibility of making any appreciable impression on a cavity, when once fully formed, either by direct or indirect treatment with antiseptic or irritating substances. This opinion is strengthened by the very unfavourable results published by the earlier operators. From experiments made on dogs, it has been shown that the injection of a strong solution of iodine into the parenchyma of the lung, causes circumscribed inflammation at the seat of the injection without giving rise to any general constitutional symptoms. Hence, it would seem possible that the impregnation of lung tissue, which was the seat of fresh and circumscribed tubercular degeneration, with powerful irritants, might lead to the destruction and subsequent cicatricial contraction of such diseased portions.

Dr. Koch has therefore, in conjunction with me, made a number of experiments on the effects of the injection of a strong solution of iodine into phthisically diseased lungs, choosing as far as possible those cases in which the disease was recent and circumscribed.

The solution used was one part iodine and one part iodide of potassium, to twenty parts of water. The instrument used was a Pravaz syringe, and at least five injections were made at each sitting. We were able by partly withdrawing the cannula and re-introducing it in a new direction, to inject from thirty to fifty different points in the diseased portion of the lung. As this operation caused a considerable amount of pain, and as each patient had to undergo it from three to four times, we thought it better to put them slightly under chloroform before operating.

In no case was the operation followed by any unpleasant symptoms of reaction, and only when, by chance, the cannula pierced a small bronchus, was the patient attacked with violent coughing with the expectoration of a brownish secretion. This happened, however, but seldom; for we soon learnt to distinguish by the sense of greater or less resistance offered to the cannula, the soft and healthy lung tissue from the harder diseased portions.

In quite a number of cases we remarked that the temperature, which before the operation was that of hectic fever, sunk immediately afterwards to normal, and remained there for several days. In no case did the patients complain of the pain continuing after the operation.

The results, however, fell far short of our expectation; for in no case were we fortunate enough to arrest the phthisical tendency. The disease seemed to run its ordinary course, and in no case where we had the opportunity of making a *post mortem* examination, did the eaten-away lung tissue show any evidence of having been in the least affected by the injection.

As the benefit of the temporary fall in temperature seemed to us out of all proportion to the risk run from the exhibition of chloroform, we felt bound to put an end to these experiments on which we had expended so much time and trouble.

Sometime afterwards I had the opportunity of seeing the effect produced on sound lung tissue by the injection of a strong solution of carbolic acid, the operation itself not being followed by any symptoms of reaction.

A man was admitted into Hospital with well-marked symptoms of acute, circumscribed gangrene, of the lower lobe of the right lung. The signs of there being a cavity were most unequivocal in the fourth intercostal space, on a line with the nipple. This was therefore the point chosen for the operation, and 0·1 gram. of carbolic acid dissolved in 1·0 gram. of aqua dest. was injected into the lung. The man died eight hours after the operation.

It was shown at the *post mortem* that the fluid had not found its way into the cavity, but had been injected into comparatively healthy lung tissue, just above its upper border. At the seat of the injection a slight reddening of the pleura was observed, and in the lung itself there was a well-marked patch of pneumonic inflammation about the size of a hazel nut.

Of course it is impossible to determine whether the inflammation would have spread, or whether it would have contracted and formed a circumscribed cicatrix, like that observed after the injection of a solution of iodine into the lungs of dogs. Considering the rapid way inflammation spreads, and that the patient lived for eight hours after the injection, it seems probable, that if the former were the case, a larger portion of lung tissue would have become involved than was actually found to be so at the *post mortem*. I am therefore in-

clined to think that the inflammation was entirely localized, and corresponded to the lobular pneumonia of Virchow.

I have often been struck with the impunity with which the lung may be pierced with the cannula of a Pravaz syringe in doubtful cases of pleurisy, where an exploratory puncture is made to aid in clearing up the diagnosis. I will, however, return to this subject when I come to speak of the theories on which our treatment of pleurisy is founded.

C. A. EWALD,
Charité, Berlin.

Extracts from Journals.

PROF. VOLTOLINI'S OPERATION FOR MAINTAINING A PERMANENT OPENING IN THE MEMBRANA TYMPANI.—In the Report on Aural Surgery, which appeared in a recent number of this GAZETTE, the above proceeding was mentioned. Prof. Voltolini, in a letter just received from him, says:—"The patient whom I presented at the meeting of the Association of Naturalists and Physicians is now wearing the ring since 24th September, 1873. I saw her the day before yesterday (3rd Jan.), and it lies in quite the same position. Since the meeting I have turned the ring round, *i.e.*, the opening of the ring which hitherto lay in the cavity of the middle ear, I have turned outwards. When I have quite established the operation, I intend to publish a more lengthened monograph about it. So much, however, I can already say, the problem is solved, although in some cases the operation is difficult of performance." H. R. S.

ANTISPASMODIC PILLS.—℞.—Pulv. assafœtidæ, pulv. camphoræ, āā ʒvi; ext. belladonnæ, ℈ii; pulv. opii, ℈i; syrupi, q. s.—M. Ft. in pil. no. clxxx. One to be taken the first day, two the second, etc., until six are taken daily or two or three times a day. Useful in hysterical and spasmodic nervous affections, in connection with bromide of potassium in doses of ten to fifteen grains.—*N. Y. Med. Record.*

Reports of Societies.

PATHOLOGICAL SOCIETY OF IRELAND.

Saturday, January 23rd, 1875.

HENRY KENNEDY, M.B.,
Vice-President, in the Chair.

Pendulous Tumour of Mamma.

DR. MACSWINEY exhibited a tumour of this description which had been removed by his colleague, Mr. Kane, from the right breast of a woman, aged 50. The patient was unmarried, and about six years previously, when she ceased to menstruate, she noticed the existence of a small wart adjoining the right nipple. This gradually increased in size and ultimately became pendulous, but never gave her any pain or uneasiness until seven or eight weeks before its removal, when it became abraded in one spot, from which an offensive serous discharge exuded. The tumour sprang from the areola and included the nipple. It was six or seven inches in length and its bulbous extremity, which was warty, irregular, fissured and indurated, measured five or six inches in circumference. Its pedicle somewhat resembled in size, and to the touch, the umbilical cord, and it also pulsated. Clinically, Dr. MacSwiney considered the tumour to be of an innocent, non-recurrent character, and due to an hypertrophy of the gland follicles. The late Mr. O'Ferrall had described and figured an almost identical tumour in the *Dublin Quarterly Journal* for 1847.

Intra-ocular Deposit of Cholesterine simulating Glioma.

Mr. WILSON presented the right eye of a child, aged 4½ years, which he had removed under the following circumstances:—When about two years of age the child had internal strabismus. Six weeks before being brought to Mr. Wilson, the child's father casually noticed a peculiar golden colour, or "emptiness," of the eye. This peculiar brilliant yellow reflection from the child's eye was very marked when she was first seen by Mr. Wilson. Several distinct retinal vessels were seen crossing this colour; the retina appeared healthy; the optic nerve was not visible; the ocular tension was increased. Mr. Wilson came to the conclusion that the symptoms were due to a gliomatous tumour of the retina, implicating its outer layer only. Sir W. Wilde, who also saw the case, differed from this opinion, but agreed in the propriety of removing the eye. This operation having been performed, it was found that between the choroid and retina was an effusion of fluid containing a large quantity of cholesterine crystals. The retina was completely detached throughout its whole extent, and pushed forward against the back of the lens. Mr. Wilson dwelt on the importance of this case in a diagnostic point of view, and its great similarity to glioma, for which, indeed, he had mistaken it. He believed, however, that he was right in removing the eye.

Fracture of the Skull.

Prof. BENNETT exhibited the calvaria of a carter, aged 19, who had been struck on one side of the head by a falling scaffolding pole which threw him down on the other side of his head against a heap of rubbish. He was stunned, but quickly regained consciousness, and was given a glass of whiskey, after which he vomited. He then recovered immediately; brought back his horse to the stable, and put him up. About three hours subsequently he was found lying in a stall in the stable, and his friends thinking he was drunk, left him there until the evening, when he was brought to Hospital. He was then stertorous and paralysed on the left side; pulse slow and feeble, and respiration exceedingly slow. No injury of the skull could be detected; the scalp, generally, pitted on pressure from effusion of blood beneath the pericranium. The man died an hour after admission, and, *post mortem*, the pericranium was found detached by effused blood as above mentioned, and a long fissure was also discovered passing from the coronal suture down to the right temporal fossa, but not extending to base of skull. The middle meningeal artery was torn about three-fourths across, at an inch above the line of incision made by the saw. There was an extremely large clot of effused blood, the greater portion of which, however, was above the position of the injury to the vessel; thus showing, in Prof. Bennett's opinion, that the dura mater must also have been separated.

Fatty Heart.

Dr. H. KENNEDY showed the heart of a woman, æt. 80, who, during life, had presented a peculiar form of respiration—more resembling the cerebral breathing described by Graves than the Cheyne-Stokes form. There was no abnormal cardiac sound. Dr. Kennedy stated that the whole of the right side of the heart was converted into fat, and that the left ventricle was also very soft and fatty. In this case the valves of the heart were very slightly affected; but, in his opinion, fatty heart and valvular disease did not, as a rule, go together.

Intestinal Obstruction.

Dr. BARTON exhibited a specimen removed from the body of an elderly man who, for five weeks before his death, had suffered from obstinate constipation. Two

months before his admission into Hospital, his bowels commenced to become confined; this increased, and eventually, after taking a strong purgative they became locked up. The man's belly was distended but not painful; the right side of the abdomen was dull on percussion. No obstruction could be felt *per anum*, and the long tube was passed up eighteen inches. After the administration of enemata and of calomel, some fluid fæces were passed. Vomiting set in, and the greatly distended colon was punctured, but without much relief. The man was in a very weak state, and evidently sinking. Colotomy was therefore performed, with immediate relief, but the patient never rallied, and died a few hours after the operation. There was extensive sub-acute peritonitis, but unconnected with either operation. At the junction of the ascending and transverse portions of the colon, the calibre of the gut, to the extent of three inches, was found so contracted that it would only admit the passage of a No. 6 catheter. This contraction was caused by a hard mass which possessed the microscopic characters of an inflammatory deposit. The pylorus was also surrounded by a similar mass, but not much contracted. Dr. Barton considered the origin and cause of the condition he exhibited obscure. In some respects it resembled a similar constriction occasionally seen in the rectum, and described by the late Mr. Colles under the name of organic stricture of the rectum.

Rupture of the Liver.

Mr. J. HAMILTON exhibited the liver of a boy, æt. seven, which had sustained extensive injuries in consequence of the fall of a wall on the lad, who only lived twenty-five minutes after the accident. There were no marks of external injury on the body. The anterior surface of the liver was covered with ecchymotic spots, but on the posterior, the spigelian lobe was nearly entirely torn away; the lobulus quadratus deeply rent, and there was also a great rent nearly separating the liver into two—all of which injuries were evidently caused by the gland being pressed against the unyielding spinal column. There was an extensive effusion of blood (26 oz.) into the peritoneal cavity.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, 13th January, 1875.

HENRY KENNEDY M.B., Vice President, in the Chair.

Cases of Chronic Gastric Ulcer.

DR. MACSWINEY read a paper detailing the history of four cases, presumably of this affection, which had lately been under his care, as well as that of a patient who, in some respects, presented symptoms closely resembling those of gastric ulcer, but which he believed to be of hysterical origin. The diagnosis of one or more ulcers in the stomach in the first four cases was founded upon the presence in each instance of the most important of the admitted symptoms of the disease; viz., pain, vomiting, derangement of digestion, and hæmatemesis (in one case only). All the patients also were females, and within the ages (15 and 30 years) at which the disease is most common. The menstrual functions were well performed in all; so that, as far as they went, these cases would not sustain the opinion that there was a direct relation between amenorrhœa and gastric ulcer. Dr. MacSwiney thought that this might be an aid to the diagnosis between the vomiting and pain in hysteria, and the same symptoms in gastric ulcer; menstruation being in the former class of cases gravely deranged, but not, in his experience, in the latter. Gastric ulcers were now ge[illegible] to be due to a local stoppage of the circulation, consequent upon disease of the gastric vessels, caused by a hæmorrhagic necrosis. Possibly a local accidental injury, such as occurred in one of Dr. MacSwiney's cases, might upon a rare occasion, be the primary cause of the disease. In the treatment of these cases Dr. MacSwiney enjoined rest in bed, and strict dietetic precautions. He gave opium internally to allay pain; gallic acid, to arrest hæmorrhage; and bismuth to arrest and cure the ulcerative process. Constipation was removed by aperient enemas, and a belladonna plaster always applied over the seat of pain. Dr. MacSwiney spoke highly of the efficacy of bismuth in ulcer of the stomach, and said that he believed the liquor bismuthi (Sacht) possessed "something approaching specific curative action in this disease."

Dr. QUINLAN had recently a case under his care, which bore out some of Dr. MacSwiney's remarks. The patient was a girl, æt. 20, who had suffered great hardship. She had all the symptoms of gastric ulcer, but on examination after death (which resulted from exhaustion), a number of vascular patches were found near the pylorus, but no ulcer. However, Dr. Quinlan believed that these patches would have run on into ulceration had the girl lived longer.

Dr. EUSTACE asked what influence position had in these cases in causing vomiting? He knew of a case in which vomiting could be induced by assuming a certain position.

Dr. GRIMSHAW mentioned the case of a girl at present under his care, who had been under observation for several years. She was subject to frequent relapses of severe hæmatemesis and pain in the stomach, which Dr. Grimshaw thought were due to repeated attacks of fresh ulcerations. He never knew a case in which the symptoms had lasted so long, and recurred so often.

Dr. JOHN HUGHES did not believe there was any pathognomonic sign of gastric ulcer. An ulcer in the stomach might exist without giving rise to any symptoms, even dyspepsia; and *vice versa*, the symptoms might be present without the disease. It was important to establish some accurate means of diagnosis, if possible, for cancer of the stomach.

Dr. T. MORE MADDEN was of opinion that derangement of the menstrual functions had a considerable influence on the hæmorrhage and other symptoms observed in gastric ulcer. He quoted two cases that had been under his care, bearing upon this point, and observed that he had seen girls suffer from pain in the stomach and hæmatemesis, in whom the catamenia had stopped. In these cases the obvious indication for treatment was to endeavour to restore that discharge.

Dr. FITZPATRICK did not think there was any connection between ulceration of the stomach and uterine diseases, but that there was between hæmatemesis and suppressed menstruation. As regards diagnosis, it was important to remember that in some cases diarrhœa might be present as a result of the presence of undigested matter in the intestines, which might also produce vomiting and even hæmorrhage.

Mr. H. G. CROLY thought the symptoms of gastric ulcer were well marked. He suggested inunction with cod-liver oil, when food given by the mouth excited vomiting. Nitrate of silver might tend to produce healing of a gastric ulcer, which he (Mr. Croly) believed to be a curable affection.

The CHAIRMAN said there was greater difficulty in the diagnosis of gastric ulcer than was by some supposed. He had seen a number of cases spread over a period of twenty-five or thirty years, in which, if ulceration ever took place, it must have healed. If the patients survived the hæmatemesis, they were generally better afterwards. The hæmorrhage, he thought, was generally an exudation from the surface, rarely from the ulcer.

Dr. MACSWINEY having replied, the Society adjourned.

SURGICAL SOCIETY OF IRELAND.

Friday, January 8th, 1875.

JOLLIFFE TUFNELL, Esq.,
President, R.C.S.I., in the Chair.

Scirrhus of Mamma.

Mr. H. G. Croly exhibited a specimen. The mass was movable; there were several enlarged glands extending high up into the axilla, which were removed, and the areolar tissue of the breast was infiltrated with cancerous masses.

Removal of Hair-pin from the Female Bladder.

Mr. H. G. Croly made a communication to the Society on a case of this kind. The patient was a girl, æt. 22, of an hysterical appearance, who had introduced the hair-pin two months before coming under Mr. Croly's care. There was pain after micturition, and blood and ropy mucus were in the urine. A lithotrite was first introduced, and the calculous concretion surrounding the hair-pin crushed; the pin itself was then easily removed by means of a nasal polypus forceps, without any dilatation of the urethra—a proceeding which Mr. Croly thought it desirable to avoid if possible. Mr. Croly exhibited an ingenious Hair-pin Extractor, made expressly for these cases by Mathieu, of Paris, which he had seen in Messrs. Fannin's Establishment, since performing the above operation.

Dr. Atthill said that dilatation of the female urethra was seldom followed by bad results.

Dr. Quinlan alluded to Sir P. Crampton's instrument which combined incision and dilatation of the urethra. He (Dr. Quinlan) had had two cases which he treated according to Sir P. Crampton's method, and in both cases the bladder regained its power speedily.

Dr. Barton had removed a hair-pin—which he exhibited—from the female bladder by dilating the urethra with sea-tangle tents, and then seizing the foreign body by a forceps.

Mr. Richardson observed that the instrument Mr. Croly had exhibited, as well as an improved instrument for extracting foreign bodies of this kind, were figured in the last edition of Sir H. Thompson's work on *Lithotomy and Lithotrity*.

Excision of the Hip.

Dr. Barton read a paper giving details of a case in which he had recently performed this operation. He referred to his first case of the operation, recorded in the *Med. Press and Circular*, Vol. I., 1872: p. 249, which had resulted very favourably, the boy being now 12 years old, and in perfect general health. The present case was that of a boy aged 13. When eight years old, he hurt his right hip jumping. Six months after this he came to Hospital in the early stage of morbus coxæ, and for two years subsequently he was lame, but did not suffer much pain. A large abscess then formed, and was allowed to open spontaneously. His general health became bad: he had no pain, but a sinus discharged pus freely. Another abscess formed; hectic set in, and he was re-admitted for the third time, suffering now from excessive pains in the joint, probably due to osteitis from use of limb. Dr. Barton excised the head of the bone below the trochanters, on the 25th of June last. The ligamentum teres had disappeared, and there was no cartilage remaining in the joint. A small spot in the acetabulum was carious, and was gouged. The patient left Hospital three weeks ago. The limb was then 2¼ inches shorter than its fellow. When lying down the boy could raise it a foot off the bed. There was still a sinus in the line of the excision discharging slightly, but it did not lead to bone.

A Case of Amaurosis.

Mr. Swanzy communicated the history of the case of a labourer, æt. 23, who had been three years under observation, having first presented himself at the National Eye and Ear Infirmary in October 1871. After complaining for a short time of frontal headache, and of vertigo when he stooped, he completely lost the sight of the left eye in the course of two days. Subsequently sight failed in the right eye also, and it became as blind as the left. The only ophthalmoscopic symptom was a slight indistinctness of the optic discs at one part of their margins. Suddenly partial vision returned in the right eye, and fourteen days later in a still more limited degree in the other eye; but, notwithstanding this recovery of function, the optic nerves gradually assumed the appearance of white atrophy. The patient had become an inmate of a workhouse, and while there, was attacked with right facial paralysis, deviation of the tongue to the same side, as well as double paralysis of the third and sixth nerves. Subsequently slight epileptoid fits occurred, in one of which he died. Six weeks before death, dry gangrene of both legs set in. *Post mortem.*—There was found incipient Bright's disease, extensive meningitis at the base of the brain, and considerable exudation of lymph in the same locality. The pia mater was the seat of numerous disseminated fibro-sarcomatous tumours, which were, in all probability, the fundamental disease. Mr. Swanzy alluded to the difficulty of diagnosis in this case. The patient was a healthy man; not intemperate, and never had syphilis. He never vomited. Even with the light afforded by the *post mortem*, it was difficult to explain the occurrence of the gangrene.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, January 9th, 1875.

LOMBE ATTHILL, M.D.,
President, in the Chair.

Annual Report of the Rotunda Hospital.

Dr. Johnston said that the sixth year of his mastership having come to a close he now brought forward his usual annual account of the state of the Hospital under his charge. During the year ending November 5th, 1874, there were 1,236 deliveries in the Hospital, and only 15 deaths from all causes, notwithstanding the prevalence of zymotic disease outside the Hospital. Dr. Johnston attributed this remarkably low death-rate to the strict cleanliness and attention to free ventilation with the external air, which is sedulously observed throughout the Hospital, as well as to the system now adopted therein of not allowing the labour to be prolonged. Including 153 patients delivered at their own homes, 254 treated in the Wards for female complaints, and 4,927 prescribed for and treated at the Dispensary, 6,570 patients were altogether relieved during the year. Of the 1,236 deliveries in the Hospital, 997 were natural, 380 being primiparæ. In 45 cases the ovum was expelled within the sixth month. There were 23 cases of twins. The forceps was employed in 138 cases, and in no instance during the year was craniotomy had recourse to. Version was performed 14 times. 7 patients were admitted with accidental hæmorrhage; 6 with placenta prævia; there were 25 cases of *post partum* hæmorrhage, but mostly of a trivial character; the placenta was retained in 7 instances; prolapse of the funis occurred in 13 instances; there were 5 cases of convulsions; 2 of epilepsy; and 5 of mania, 1 of which died of apoplexy. Chloroform was used in labour 104 times. Of the 15 deaths, 9 were of a zymotic type: viz., 3 scarlatina, 3

peritonitis, 1 pyæmia, 1 typhus, and 1 typhoid fever. There were 40 cases in which the labour exceeded 24 hours; 34 in primiparæ, and 6 in pluriparæ. Abortion occurred in 45 cases, and premature birth in 51. In 138 instances it was deemed advisable to employ the forceps in order to effect delivery, as well for the safety of the mother as to preserve the life of the child. 105 mothers were primiparæ, and were delivered of 59 male children, and 46 female, 3 being dead at birth; 97 lived, and 5 died. In 48 of the foregoing cases the delivery was effected by the forceps before the os was fully dilated, 34 of the number being primiparæ, and 8 pluriparæ. Dr. Johnston was aware that this practice might seem to some unjustifiable; but he repeated the statement which he made on a similar occasion last year (*vide* IRISH HOSPITAL GAZETTE, Vol. II., p. 30,) and said that he was daily more convinced of the great advantage of the practice in skilful hands, in saving the life of both mother and child. The Report, of which we can here give a mere outline, contains, like former ones, an able and painstaking exposition of work done during the past year, and is also accompanied by 13 tables, which give a clear and comprehensible statistical idea of the results of the practice and experience of this admirably conducted institution.

The PRESIDENT said that Dr. Johnston's valuable report proved that in a properly conducted maternity the deaths might be reduced to a minimum; and that a more favourable report could not have been presented by any one in private or Hospital practice. The President referred to Dr. Johnston's frequent use of the forceps, and especially its use before the os was dilated, as a subject which would be likely to evoke criticism; but which, however, had been proved by Dr. Johnston's statistics to have been attended in his hands, by most successful results.

Dr. CRONYN had been very much impressed by the great skill and apparent ease, with which Dr. Johnston had applied the long forceps in a case in which the os was not dilated more than a half-penny.

Dr. HENRY KENNEDY was of opinion that ⅞ths of the cases of zymotic diseases noticed in Dr. Johnston's report had received the specific poison into their systems before they came into the Hospital; as was apparent, in most of the cases, from the rapidity with which they took ill after delivery.

Dr. KIDD inquired how many times Dr. Johnston had failed in delivering the child with the forceps when the os was undilated? [Dr. Johnston. Not once]. And also as to the amount of force which it would be safe to apply to effect delivery in these cases?

Dr. M'CLINTOCK said that the salient feature in Dr. Johnston's paper was the use of the forceps before the os was dilated—a practice which opened a new era in midwifery, being opposed as it was to the views of the best authorities, but which should not therefore be repudiated by us. Dr. Johnston has largely tried and satisfactorily tested this practice. He shows that the long forceps may be applied, with safety to the mother and child, under certain trying and perilous circumstances. The knowledge of that alone was a great step, and one most useful to hold in reserve. He, Dr. M'Clintock, thought that the rule for the application of the forceps in ordinary cases should be laid down with great precision. He believed it would be a very hazardous proceeding in cases of rigidity of the os. In certain cases of tedious labour also, an indiscriminate resort to the forceps would be fraught with danger, especially in the hands of inexperienced men. Dr. M'Clintock was struck by the number of primiparæ delivered—nearly ⅓rd of the entire number—with, nevertheless, so remarkably small a mortality.

Dr. JOHNSTON, in his reply, stated that when once you got the forceps within the os, it was wonderful how very rapidly it expanded. He had had no reason to repent of the bold step he had taken.

Sanitary & Meteorological Notes.

Compiled by J. W. MOORE, M.D.

VITAL STATISTICS
OF EIGHT LARGE TOWNS IN IRELAND.
WEEK ENDING SATURDAY, JAN. 2ND, 1875.

TOWNS.	Population in 1871.	Births Registered.	Deaths Registered.	Deaths from Zymotic Diseases.							Annual rate of mortality per 1,000 inhabitants.
				Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	
Dublin ..	314,666	205	269	,,	1	11	1	1	2	3	44
Belfast ..	182,082	143	260	1	10	34	2	3	10	3	74
Cork.....	91,965	58	89	,,	,,	,,	,,	,,	1	7	50
Limerick	44,209	19	14	,,	,,	,,	,,	,,	,,	,,	16
Derry....	30,884	18	21	,,	,,	,,	,,	,,	1	,,	35
Waterf'd.	30,635	28	56	,,	,,	,,	,,	,,	4	,,	95
Galway..	19,692	13	24	,,	2	,,	,,	,,	3	1	63
Sligo....	17,285	11	12	,,	,,	3	,,	2	,,	,,	36

REMARKS.

Except perhaps in the case of Dublin, this week's Returns lose all their scientific value in the face of the following statement by the Registrar-General for Ireland—"The high death-rates afforded by the Returns for Dublin and the Provincial towns are partly *due to irregularity in registration—arrears being generally entered up to the last week of the quarter.*" Limerick alone seems in no way to have taken the opportunity of making up arrears of registration. To gain any information as to the mortality of the week, we have to turn from the humiliating break-down of the registration Returns in Ireland to the Returns in the English towns. The cold of December, which was so much more intense in England and Scotland than it was in Ireland, caused an excessive mortality—chiefly from affections of the respiratory organs. In Glasgow the death-rate of the week was 60 per 1,000 annually, in Edinburgh 42, and in London 37. As Christmas interfered with registration, some deduction may fairly be allowed from these figures; but in any case the mortality was excessive, for the mean of the death-rates in London during the last two weeks was 31 per 1,000. The zymotic death-rate was rather low—the average from the 7 chief zymotics being 3·8 in 18 large English towns, 3·0 in London, and 3·2 in Dublin. Respiratory affections caused 1,098 deaths in London (mean temp. = 28°·8), and 88 deaths in Dublin (mean temp. = 35°·9).

FOR WEEK ENDING SATURDAY, JAN. 9TH, 1875.

TOWNS.	Population in 1871.	Births Registered.	Deaths Registered.	Deaths from Zymotic Diseases.							Annual rate of mortality per 1,000 inhabitants.
				Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	
Dublin ..	314,666	184	276	,,	1	14	1	1	6	7	46
Belfast ..	182,082	120	124	,,	9	20	,,	3	,,	1	35
Cork	91,965	35	38	,,	,,	,,	,,	,,	,,	1	21
Limerick	44,209	16	43	,,	,,	,,	,,	,,	,,	1	51
Derry....	30,884	14	18	,,	,,	,,	,,	1	,,	1	30
Waterf'd.	30,635	15	5	,,	,,	,,	,,	,,	,,	,,	8
Galway..	19,692	8	10	,,	,,	,,	,,	,,	,,	,,	26
Sligo	17,285	7	8	,,	,,	,,	,,	1	1	,,	24

REMARKS.

Limerick and Dublin show a very high death-rate. In Belfast and Derry also the rate of mortality was high; in the other towns it was moderate or low. In London the death-rate was 35 per 1,000 annually, in Glasgow 66 (!), and in Edinburgh 45. The deaths from zymotic diseases numbered 42 in Dublin, 38 having

IRISH HOSPITAL GAZETTE.

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Hospital Reports.

MEATH HOSPITAL.

CASE OF ENTERIC FEVER,

SHOWING REMARKABLE CHANGES IN TEMPERATURE.

Under the care of DR. STOKES,
Physician to the Hospital.

Reported by DAVID DRUMMOND, M.B., Clinical Clerk.

JOHN O'H——, æt. 20, a stoker in the gas works, of very intemperate habits, who, according to his own statement, "was drunk as often as he had hairs on his head," was admitted into the Meath Hospital, Sunday, Dec. 20th, 1874. Has had a cough and "shivery cold" for a fortnight back, during which time he had three attacks of hæmoptysis, for fear of a return of which his friends brought him into Hospital. Has had diarrhœa, though not to an excessive degree, during the last week. On admission he was in a state of great prostration, and had to be carried up stairs. The abdomen was sensitive on pressure, and especially over the right iliac fossa was slightly tumid and tympanitic. A few rose-coloured spots, disappearing on pressure, were scattered over the abdomen and back, and the whole body was covered with an abundant petechial eruption. His breathing was very laboured, and a distressing short cough, of a pneumonic character, with a tenacious bloody expectoration, indicated considerable pulmonary complication; in fact, the patient presented more the appearance of pneumonia than of enteric fever, the cheek being flushed and the eye dull and injected. A physical examination of the chest showed dulness on percussion over the backs of both lungs, especially the left, with universal fine moist râles, and here and there patches of consolidated lung; tongue dry, hard, and black, the point being protruded with difficulty beyond the teeth; pulse 100; resp. 40, and temp. 104°; heart sounds scarcely audible, and impulse very slight; voice excessively weak. Ordered—

℞.—Olei terebinthinæ, ♏xx;
Liq. potassæ, ♏v;
Pulv. tragacanth., gr. v;
Syrupi, ℥i;
Aquæ, ad ℥i.—M.

Fiat Haust. Sig.—One such to be taken every third hour.

To have also, beef-tea, 1 qrt. of milk, and whiskey, ℥iv.

Next day, on the pulmonary symptoms becoming more alarming, large doses of quinine and carbonate of ammonia were administered; the whiskey was increased to ℥vi, and turpentine stupes were applied.

23*rd Dec.*—Not much change; diarrhœa slight, two to three motions *per diem*. Up to this time patient had been treated by Dr. Foot, but owing to his accident, the case now came under Dr. Stokes' care.

24*th.*—Nineteenth day of disease. The morning temp. rose to 106°; pulse, 124; resp. 44; considerable delirium, patient muttering to himself; slight subsultus; tongue perfectly black, fissured, and glazed as if painted over with collodion; heart nearly inaudible, without impulse. Stimulants increased to wine ℥x, whiskey ℥vi. Evening temp. down 4°; pulse also much lower. Was dry-cupped; the marks left by the cups became almost immediately black, though the application was of exceedingly short duration.

27*th.*—Turpentine and quinine stopped, and decoction and tincture of bark substituted; wine increased to ℥xv; whiskey to ℥viij; also ordered two fresh eggs. Heart sounds inaudible; no impulse could be felt; pulmonary affection much the same; expectoration still very tenacious and bloody; great tendency to bleed from the gums, as also from an abrasion which had healed the day before. Evening temp. again rose to 106°; diarrhœa still continuing moderate; delirium more constant; tendons jerking violently.

28*th.*—Patient lies in a state of stupor; voice inaudible, though when roused attempts to speak; heart same as on previous day. A galvanic current was applied, for some time, by means of Gaiffe's battery, over the heart; and although the current was very powerful, it did not seem to rouse him. He was ordered to have a blister over the precordia, and ℥i of the aromatic iron mixture every second hour; stimulants as before; galvanism repeated at night.

29*th.*—Twenty-fourth day of fever. Perspired profusely for three hours through the night, during which time his temperature fell from 105°·6 to 97°·8, the pulse also coming down thirty-six beats in the minute. About 12 o'clock P.M. an intense rigor set in, which lasted for nearly four hours; in the rigor the temp. rose to 105°, the pulse to 130, regaining the thirty-six beats lost on the diaphoresis of the previous night; heart slightly audible; tongue softer; no

blood in the expectoration; breathing quieter; takes nourishment well; no change in treatment.

31*st.*—Temp. again down to 98°·6, but soon rose to 103°·5 in a rigor which lasted three hours, the intensity of which was apparently controlled partly by the exhibition of quinine, gr. v, and partly by tightly compressing the left arm and right thigh. To-day, for the first time, patient seems to notice and object to the galvanism. Heart stronger; pulse rapid (130) and difficult to count owing to subsultus present; wine diminished to ℥x, and whiskey to ℥iii; galvanism stopped; is more intelligent; lungs clearer, air entering more freely.

Jan. 1*st*, 1875.—Twenty-seventh day of fever. Great fall in temp., viz., from 103°·4 to 94°·5 at 12 (P.M.) o'clock; pulse very weak (88); deafness observed for the first time; heart sounds inaudible; felt very cold indeed; the nurse found great difficulty in keeping him warm. Wine increased to ℥xx, and galvanism to be used again. Had frequent slight rigors during the day; in the evening the temp. rose to 106° at 6 P.M., but by 8 o'clock P.M. was down to 105°; pulse 148 (thus in six hours the temp. varied through 12°); heart sounds could be distinctly heard.

2*nd.*—Twenty-eighth day. Temp. again down, viz., 96°·5; had good night; heart much stronger; impulse could be felt even when patient lay on his back, both sounds distinctly audible; more deaf than yesterday; is perspiring freely; breathing much quieter and râles diminishing; expectoration more bronchitic: whiskey and galvanism stopped; wine ℥xx. Temp. at 6 o'clock P.M. 98°·2, and at 8 o'clock P.M. 104°·6, thus over 6° of variation through two hours.

On the morning of the 3rd January, temp. was again below 97°; pulse 96, and tranquil. Still lies in a state of stupor, though is more easily roused; voice stronger, and heart much better; tongue softer and cleaner. At 6 o'clock P.M. temp. 98°, about 7.30 P.M. rose to 103°. After this date, the temp. varied from 98°–99° till the termination of the case, the convalescence being marked by continuation of weakness of heart, especially of its impulse. The convalescence was progressive, and at last complete.

REMARKS.—There are a few points in this case worthy of notice; first, with reference to the long continuance of the weak state of the heart; thus differing from the weak heart of typhus, which, as Dr. Stokes has pointed out, responds to stimulants much earlier than in enteric fever. The sudden and great changes in temperature are likewise of interest, and also the late occurrence of deafness. At the commencement of his illness, the patient was suffering from gonorrhœa; but the discharge soon ceased altogether, and did not return when he recovered, contrary to the general rule.

NORTH INFIRMARY, CORK.

NOTES OF CASES UNDER THE CARE OF DRS. HOBART AND SHINKWIN,

Surgeons to the Infirmary.

Reported by Mr. MARTIN HOWARD, *Resident Pupil.*

I.—CASE OF ACQUIRED TALIPES EQUINUS.

Under the care of Dr. HOBART.

MARY A——, æt. 16, a pale, anæmic-looking girl, was admitted into the Infirmary on Wednesday, 16th September.

She had previously been in the Hospital, suffering from an indolent ulcer below the external malleolus. She was confined to bed with this disease from April to the end of August, and when the ulcer was healed, she could with difficulty place the heel upon the ground. The contraction progressively increased, and tenotomy was proposed. She refused to consent to operation, and left the Infirmary, but returned on the above day, and requested to be taken in. The heel was raised seven inches from the ground, and covered with fine shining skin, showing it had not been in contact with the ground since the date of her discharge. The toes were bent upwards, and in walking the weight of the body was thrown upon the phalangeal ends of the metatarsal bones. The leg was much wasted; the ulcer had also returned, and the patient, so far from improving, had fallen away considerably.

The ulcer having been again healed, and the girl's strength recruited, Dr. Hobart divided the tendo Achilles on the 1st October. The small puncture was closed, drawn together with adhesive plaster, padded, and bandaged.

Two days after this the wound was found united by the first intention.

Next day a splint was adjusted so as to bring the foot at right angles with the leg, and the use of the splint was persevered in until this object was attained.

On the 21st November she was discharged, being at that time able to place the heel on the ground when walking slowly. When last seen she was able to walk about without the slightest trace of deformity, and with the foot flat upon the ground.

II.—CASE OF ADHERENT ORBITAL SEBACEOUS TUMOUR.

Michael L——, æt. 17, was brought to the Hospital on account of a tumour of the above nature, which the boy had since he was four years old, and which his parents noticed had increased in size each year. Extirpation was recommended, and after some delay, was consented to. The tumour was situated at the external angle of the eye, globular in shape, and hard to the touch.

In the dissection the wall of the cyst gave way beneath the pressure, and a small quantity

of a white liquid secretion escaped, in which small hairs were found. The tumour was adherent to the bone, and the fibrous cyst remained behind after the tumour was squeezed out, and had to be excised.

The unexpected presence of pus led to inquiry, and the mother stated that when her son was about three years old, he was struck with a keeler(1), just in the spot where the tumour existed.

The wound healed without leaving any mark.

III.—CASE OF ACUTE ORCHITIS.

Under the care of Dr. SHINKWIN.

William G——, æt. 30, a strong, healthy-looking man, was admitted into the Infirmary on Saturday, 24th October. He stated that immediately after recovering from an attack of gonorrhœa, he noticed the testicle becoming enlarged, and that, in the course of a few days, it had increased so much in size, and brought on such great pain and difficulty in locomotion, as to necessitate his lying up and sending for a doctor. Leeches were applied, which afforded temporary relief; but eventually the symptoms became greatly aggravated, and he was recommended to apply for admission into Hospital.

He presented well-marked signs of acute orchitis. The gland was flattened and oval in form; pressure caused intense pain, which was felt in the loins, hip, and down along the thighs, and the scrotum was red and swollen.

There was also some effusion into the tunica vaginalis; but little constitutional disturbance existed, owing probably to the excellent health the patient always enjoyed.

Brisk purgatives were ordered on Sunday, and next day a blister was ordered to be applied along the left cord, and the following mixture prescribed:—

℞.—Sulphatis quiniæ, grs. xvi;
Acid. sulph. dil., ℥ss;
Syr. aurantii, ℥j;
Aquæ., ad., ℥viii;
Solve et adde;
Potass. iod., ℥ii.—M.
Ft. Mist. St., ℥j ter die.

When all the inflammatory symptoms had subsided, compression by means of strong adhesive plaster was resorted to in order to get rid of the effusion which still remained.

Two days later the testicle had reduced so much in size that the strapping had to be removed; and after the second strapping such improvement was effected, that it was not considered necessary to repeat the process.

In three weeks from the date of admission all traces of the disease had disappeared.

Remarks.—With reference to the treatment of this case, Dr. Shinkwin stated that it was such as he was invariably in the habit of adopting whenever a case of the kind came under his notice; and that he had never yet met with a case of acute orchitis which did not rapidly yield to purgatives, quinine and iodide of potash, a blister along the cord, and strapping the testicle.

There was one thing, however, he wished to caution the class against, and that was the time or stage, or kind of inflammation in which strapping was applicable.

Strapping in the early course of the disease Dr. Shinkwin disapproved of, believing that it is not in acute inflammation, but in the passive state that strapping is most beneficial and chiefly indicated. It is, in short, only after all the acute symptoms have been subdued by active measures that it can realize the expectations of the surgeon. When the high inflammatory action has passed away, strapping greatly facilitates the cure, affording relief from pain, causing the rapid subsidence of the swelling, and removing all effused matter.

IV.—CASE OF CANCER OF THE PENIS.

Jeremiah N——, æt. 55, car driver, married, was admitted into the Infirmary on Tuesday, 10th November.

He stated that about three months ago a tubercle first made its appearance on the prepuce, which, despite medical treatment, gradually gave rise to a large, irregular, and sprouting mass, having a hard, granular feel. Within the past month it had bled several times, and a discharge of a most offensive character was constantly escaping from it. No family history of cancer existed, but in his youth he suffered from an occasional attack of gonorrhœa, and was at one time much troubled with warts upon the penis. He was a strong, well-built man, and had always enjoyed good health.

On examination, it was found that the disease engaged almost the entire of the penis, extending even to within a quarter of an inch of the arch of the pubis. Two objections to amputation presented themselves; namely, the danger of the stump retracting under the pubis, and the danger of a return of the disease from sparing as much of the organ as would prevent retraction of the stump.

The consulting Surgeons, however, came to the conclusion that it was clearly their duty to recommend amputation; thereby, as Professor Erichsen says, ridding the patient of a loathsome disease, and placing him in a state of comparative comfort for some months—mayhap for life.

Chloroform having been administered, a gum elastic catheter was introduced into the bladder, and a long hair-pin passed as far back as possible. The diseased part was then held suspended by a tape, divided with the knife, and removed, the catheter being cut a little higher up, and allowed to remain in the bladder. The arteries were

(1) A round tub used in a dairy in the manufacture of butter.

next tied, and the stump dressed with lint steeped in alum wash. The catheter was next plugged, the patient conveyed to bed, and a haustus opii (mins. xxv) administered.

The morning after the operation, the report was as follows:—Patient had a fair night; suffered no pain; passed water twice; pulse 100; temp. 101°·6; no bleeding. The hair-pin was withdrawn, and an opiate ordered at bed hour.

No unfavourable symptom set in during the next few days. Considerable difficulty and uneasiness to the patient existed, owing to the tendency of the catheter to escape from the bladder, and one morning Dr. Shinkwin, on his visit, found the orifice of the urethra so much contracted, that he was unable to re-introduce the instrument, which had come away in the night while the patient was at stool. By the aid of a director, he at length succeeded in introducing a size smaller, which was afterwards left in the bladder for a few days, and contributed a good deal to preventing any further contraction of the orifice of the urethra.

At the end of ten days the catheter was taken out, and introduced as often as was necessary.

Shortly afterwards the parts healed in nicely, and the patient being able to make water without any inconvenience, left Hospital on the 10th December.

Remarks.—Dr. Shinkwin expressed some doubts as to whether the disease in this case had been entirely extirpated from the system by the operation; but felt satisfied that much had been done for the patient by freeing him from a terrible and disgusting disease, and that, in all probability, the non-implication of the lymphatic glands—showing that the patient's constitution had not been contaminated by the disease—might ensure the success of the operation.

Since his discharge the patient has not put in an appearance at the Hospital. A few days ago, Jan. 20th, however, we paid a visit to his house, and ascertained that he does not suffer the slightest pain or uneasiness, and can pass water quite freely. The orifice of the urethra has not contracted, even though he declares he did not, as directed, use the catheter occasionally to dilate the opening. Contrasting his present condition with his state when labouring under this loathsome disease, one cannot help strongly advocating the use of the knife in similar cases, despite the untoward circumstances that stare the operator in the face.

CASHEL UNION HOSPITAL.

NOTES OF SURGICAL CASES.

Under the care of Dr. LAFFAN,
Surgeon to the Hospital.

HYDRARTHROSIS OF KNEE-JOINT.

This occurred in a boy aged 18 years, the right knee being involved. There appeared to have been at no time any symptoms of inflammation present. The affection had lasted for some months at the time of the boy's admission into Hospital. I drew off the fluid with the aspirator and prescribed rest and cold lotions. No bad symptom whatever ensued, and no reaccumulation of fluid took place. The treatment was followed up with strapping and counter-irritation, and after four weeks the patient left well.

PRESSURE IN CHRONIC ADENITIS.

I was recently afforded a gratifying proof of the value of pressure in the treatment of certain classes of glandular enlargements. A strumous-looking girl, aged 20, came under my care for enlargement of the two left superficial parotidean glands. Both were much enlarged, the superior gland having attained the size of a hen egg. There was no sign of inflammation or suppuration, and the disease had lasted a considerable time. Every kind of treatment usually employed in such cases, including acupuncturation, was tried without producing the slightest diminution in the bulk of either tumour. I determined at last to try the effect of a piece of metal so applied over the tumours as to make firm and continuous pressure on them, and after some weeks this treatment succeeded in all but entirely reducing the glands to their natural dimensions.

CICATRIZATION IN CANCER.

A case of epithelioma of the scrotum, in which healing took place under the simplest treatment, merits a passing word. It occurred in a man, aged 50, and after a few weeks of rest, cleanliness, and application of spermaceti ointment, unexpectedly healed up. Intractability to the healing process is so constant an attribute of a malignant sore, that one is apt to forget that there are instances to the contrary; and this case is mentioned from its bearing on prognosis. It is not far to see how a similar case, occurring in private practice, might be turned to the discredit of the Practitioner, who would have deduced his opinion from the general rule.

Original Lectures.

CLINICAL LECTURE ON THE RELATION BETWEEN CIRRHOSIS OF THE LIVER AND HEART DISEASE.

By S. M. MacSWINEY, M.D.,
Physician to Jervis-street Hospital.

ARTICULAR RHEUMATISM—CARDIAC HYPERTROPHY AND VALVULAR DISEASE—CIRRHOSIS OF LIVER—SLIGHT JAUNDICE—ANASARCA AND ASCITES—ŒDEMA OF LUNGS—RIGHT BASIC PLEURAL EFFUSION.

Gentlemen—I purpose drawing your attention to-day to a case of dropsy in No. 3 Ward which has been examined by me in your presence many

times during the six weeks the patient has been under our notice as an inmate of the Hospital. We shall find some clinical points of considerable Medical interest offered to our notice by an investigation of the symptoms and signs presented by this man. His Medical history is as follows:—A labourer by trade, he has worked on the quays in this City for the last five years. Unfortunately, the operatives in that part of the town would appear, judging from our Dispensary experience here, to have an exceptional facility for obtaining alcoholic stimulants, and to avail themselves of this opportunity to the fullest extent. But although this man's habits were, by his own admission, rather intemperate, it would seem that they were not so to a very extreme degree. Such, at least, was the result of our inquiries, and it is borne out by some observations to be detailed by and by. Two years ago he was attacked, after exposure to wet and cold, with a shivering fit. He quickly got severe pains in several of his larger joints, and the corresponding limbs swelled and ached very much. His appetite left him, and he could not sleep in consequence of the pain he endured. He was a sufferer in this way for six weeks, during which time he was quite unable to move without experiencing torture. After this period, however, he got better, and ultimately became, so far as he knew, quite restored to health, in which state he continued until nine weeks ago, when he began to exhibit symptoms of failing health; his strength was diminished, his appetite nearly gone, his breath became short, he had palpitations, and he suffered from extreme irregularity of bowels. He at this time noticed that the fæces were nearly white, and very dry. These symptoms became aggravated, and, feeling himself very ill, he sought admission into Hospital. Thus far, his own account.

You saw me examine him when he was received into Hospital, and you will remember his condition at that time, as I drew your special attention to it. His face was in parts pallid, in parts dusky-yellow, and somewhat, but not very much, emaciated. His conjunctivæ were markedly yellow, in fact, jaundiced. His tongue was dry and coated with a brownish froth. The liver could not be felt, but we found that the region of hepatic dulness was not strictly normal: it did not extend below the costal margin, but it reached upward to the level of the fifth rib. The abdomen was protuberant, almost universally dull on percussion, and markedly fluctuating. There was ascites, and in fact many of you determined for yourselves the existence of fluid in the sac of the peritoneum. In the next place we observed that his legs were swollen, particularly below the knees, where they pitted on pressure, but the œdema in the lower limbs was not at all extreme or even considerable. We got, as you will remember, a specimen of his urine, and found that it was scanty, very high-coloured, had a specific gravity of 1022, and deposited copiously, staining the vessel deep purple: it did not contain a trace of albumen, but was loaded with red-coloured lithates, which fell in a mass to the bottom of the vessel. Proceeding in our inquiries, an examination of his chest eventuated in the determination of the following important results:—Percussion was dull at the base of the chest posteriorly at both sides, the dulness at the right side extended upwards for four inches, that at the left for two inches; at the left base a crepitus with large bubbles was audible during inspiration; at the right base the murmur of respiration was absent, and no sound save the distant rumbling of the air entering and leaving the trachea could be heard. When the hand was placed on the right base posteriorly, and the man was made to speak loudly, no vibratory thrill was conveyed to our sense of feeling: all was immovable as when extensive pleural effusion exists. An examination of the chest anteriorly revealed no evidence of lung affection in that situation, but the cardiac phenomena were of a serious and striking character. Thus, as you know, the region of cardiac dulness was abnormally extensive, and the apex beat was visible in the interspace between the fifth and sixth ribs. When I placed the stethoscope over the chest under either clavicle or upon any part of the sternum, I heard a singularly loud, blowing, systolic murmur. It was, I think, the loudest cardiac bruit I ever heard. Going more into detail I became aware that there was first, this very loud, blowing, systolic bellows-murmur to be heard very generally over the chest, but loudest in the aortic valve region, and secondly, that it was followed by a rather faint, but still distinct, short, abrupt, diastolic bruit. In fact there was a double bellows murmur audible over the aorta, most pronounced at about the sternal extremity of the second costal cartilage; the bruit corresponding to the first sound being extremely loud and prolonged, that replacing the second sound being very short and faint. Proceeding in the investigation now to the left, to the region of the heart's apex, it was found that there was a point about midway between the heart's base and the apex in which the murmurs were lost, or if any abnormal sound was heard it was the systolic which was dull and distant. At this point the first sound of the heart could be plainly, though somewhat faintly heard; but again lower and still more to the left, a soft bruit now again replaced the first sound, and something like a normal second sound could be detected.

Now what explanation are we to give of these various symptoms and signs? What conclusion as to the nature of the disease this man suffers from are we to arrive at? The correct interpre-

tation of all this, in my opinion, is as follows :—We may be sure the patient had rheumatic fever two years ago, and no doubt one of the most disastrous of the occasional complications of that affection arose then, and he got endocarditis; this serious inflammation left after it some of those organic lesions in the interior of the heart which too often are its results, and, as a consequence, permanent structural disease and impairment of the efficiency of the valves has for some time existed. To this general valvular disease I trace all the subsequent pathological events. Thus as to the dropsy :—Ascites is always produced by the retardation from some cause of the flow of the blood through the portal system. I have no doubt that such impediment to the venous circulation in the abdomen has occurred in this case, through an obstruction existing in the liver, and that obstruction I believe to be due to cirrhosis of that organ in the early stage. The investigations of our countryman, the late Mr. Kiernan (*Philosophical Transactions*, 1833) were the first to cause more accurate knowledge than previously existed of cirrhosis of the liver to be obtained. Even still, however, all are not fully agreed as to its essential nature; but whether we hold, as most do, that this lesion begins by a chronic inflammation of the capsule of Glisson, followed by the exudation of an organizable blastema, with, ultimately, contraction of the connective tissue and consequent pressure on the secretory parenchyma and the portal vein; or maintain with Beale that there is no evidence of inflammation at all, and that the morbid change in cirrhosis commences in the hepatic cells, which undergo degeneration, and finally are destroyed; we can understand how, in either case, the portal circulation must be sooner or later impeded.

Now, gentlemen, clinical observation shows us that the primary condition of the liver, of which the last stage is cirrhosis, may be due to one of many causes. Of these, abuse of spirituous liquors, constitutional syphilis, persistent intermittent fever, and diseases of the heart, are the most important. To the last-named cause I refer the origin of the disease in the present instance. It can scarcely be said to be due to alcoholism, for though indulging in beverages of that class rather freely, he was not, as we have seen, very intemperate. Moreover, the liver was not greatly reduced in size as it is in alcoholic cirrhosis; nor to syphilis, for he never had a chancre; and the history of rheumatism, together with the present cardiac signs, prove the existence of heart disease, and point to that as the probable origin of the affection of the liver. But you will ask, how can the cardiac affections cause this change in the liver? I answer, that derangement in the circulation of the liver has been recognized by many observers as resulting from disease of the heart, and in fact it has been demonstrated that this relation does exist. To be sure Frerichs (*Diseases of the Liver*, Vol. II.: pp. 31-34, New Sydenham Society's Translation) is of opinion that the lesion of the liver resulting from heart disease, though like, is not identical with true cirrhosis. But I think that Trousseau (*Clinical Medicine*, Vol. V., p. 119, New Sydenham Society's Translation) has conclusively established that the two affections often stand to each other in the relation of cause and effect; and I take this opportunity to commend Trousseau's lecture on this subject to your perusal. He adduces overwhelming evidence in support of his view that cirrhosis is due to cardiac disease sometimes; and in my opinion it is not difficult to understand the several steps in the morbid process. The result of insufficiency of the valves is, after a time, a stasis of the blood in the liver; then follow, first hyperæmia, next the exudation or degeneration which is the factor of the cirrhosed state, then, lastly, dropsy.

I have but little to say on the subject of treatment. You witnessed what was done in that direction yourselves, and you marked the result. Our efforts were concentrated on three indications; first, to strengthen the heart; second, to establish the due equilibrium of the circulation; and third, to procure the energetic action of the kidneys; and the efficiency of the remedies is well denoted by the facts that the anasarca is gone, the ascites greatly lessened, the renal secretion copious, clear, and with a specific gravity of 1012, and the man's general health very considerably ameliorated.

Progress of the Medical Sciences.

REPORT IN OPHTHALMOLOGY.

By C. E. FITZGERALD, M.D., Dubl.,
Opthalmic Surgeon to the Richmond Surgical Hospital;
Assistant Surgeon to the National Eye and Ear Infirmary;
Lecturer on Ophthalmic Surgery, Carmichael School of Medicine.

THE first case in which embolism of the central artery of the retina was diagnosed by means of the ophthalmoscope, must doubtless be regarded as one of the most striking proofs both of the value of that instrument and also of the consummate skill of Von Graefe. The record of that remarkable case, and the chain of reasoning which led to the diagnosis, must always be looked upon as a monument of Graefe's brilliant genius (*Archiv. f. Ophth.* Bd. V. Abth. 1.) The peculiar appearances presented in the case were so clearly and accurately described, it was but natural to suppose, now that its features were so well defined, that the reports of similar cases would quickly follow, and accordingly we find several, more or less resembling this, were published by Blessig, Schneller, Liebreich, Pagenstecher, Fano, Hutchinson, Knapp, and others. Liebreich[1] alone states that he has met with seventeen cases. Graefe's patient was seen for the first time seven days after the sudden attack of blindness. The appearances then noted were the following:—The optic disc was

(1) *Atlas d'Ophthalmoscopie.* Paris, 1870: p. 19.

very pale, and all its vessels were reduced to a minimum. The principal arterial branches beyond the margin of the disc appeared as very narrow lines, their ramifications gradually decreased in size, and those branches which in the physiological state are comparatively large, were now no longer perceptible. The condition of the veins differed from that of the arteries; it is true they appeared everywhere much thinner than normal, but as they approached the periphery of the fundus, they relatively increased in calibre. Two days later was exhibited the singular phenomenon of movement in the column of blood contained in the veins, and five days afterwards, that is fourteen days from the attack, an important change appeared in the region of the macula lutea. This consisted in an opaque greyish white infiltration of the retina, which surrounded the yellow spot and extended up to, and indeed included, a portion of the optic disc. The centre of the yellow spot (*foramen centrale*) appeared surrounded by a bright cherry-coloured ring, so that at first it looked almost like an hæmorrhage in the middle of the infiltration. There was well-marked cardiac disease, to which the patient eventually succumbed, and a *post mortem* examination, conducted by Schweigger, completely confirmed the diagnosis, for an embolus was found in the central artery of the retina, quite close to the lamina cribrosa.

Such were the features of this remarkable case as sketched by Von Graefe, and we believe that most, if not all, the cases since reported have exhibited to a greater or less extent the same characteristic appearances. Practically, however, it seems to have been considered quite sufficient to stamp a case as one of embolism of the arteria centralis retinæ, if there had been the history of an attack of sudden, complete, or almost complete blindness, and the ophthalmoscope showed a bloodless or almost bloodless state of the retinal arteries, together with a peculiar effusion or infiltration in the region of the macula lutea, in the centre of which was a bright cherry-coloured spot.

Till quite recently the correctness of the diagnosis in the numerous cases hitherto recorded, seems never to have been questioned except by Von Carion, Steffan, and Wecker. The first-named writer, indeed, goes so far as to express very strongly his entire disbelief in the occurrence of the accident in any of the cases which have been reported, including Graefe's.(1) He, however, brings forward very few arguments of any great weight either in support of his objections or of the theory he holds regarding the true nature of these cases. He considers the evidence in favour of occurrence of embolism of the arteria centralis retinæ is insufficient, chiefly because there have been so few *post mortem* examinations of cases in which it has been diagnosed. He says—"If we take a comprehensive view of all that has been reported on this subject, we cannot escape the conclusion that it is an inflammation, and usually a retro-ocular neuritis, which, by abundant secretion of morbid product, and consequently a contraction of the space, has caused the lessening in the calibre of the vessels. Such a view is the more justified, when we consider that, in rare exceptions, the proliferation has always, for a longer or shorter time, declared itself by a very great opacity of the optic papilla and of the retina. The actual closure of a single branch or the trunk of the central artery, is not excluded in this view, but is explained in the simplest manner, by inflammatory thrombosis. As has been demonstrated, this is by no means a rare occurrence in neuro-retinitis."(2) Both Steffan(3) and Wecker(4) appear inclined to accept a similar explanation, at least as regards the majority of the cases.

A remarkable paper by Dr. Loring published in the *American Journal of the Medical Sciences* last year,(1) and already noticed (*vide* IRISH HOSPITAL GAZETTE, Aug. 1, 1874: p. 237), gave these doubts a more definite form; but an important monograph by Dr. Hugo Magnus(2), which appeared about the same time as Dr. Loring's paper, has placed the whole question in a new light, and will probably lead to a complete change of opinion regarding the nature of those cases which have hitherto been looked upon as examples of embolism of the central artery of the retina. In this monograph Dr. Magnus endeavours to prove that the signs and symptoms of embolism of the central artery of the retina and hæmorrhage in the optic nerve bear a very close resemblance to one another, but that nevertheless they each possess certain definite peculiarities which render a differential diagnosis possible.

For the purpose of fully investigating the subject, the author undertook, with the assistance of Dr. Buchwald, a series of experiments upon the retro-bulbar portion of the optic nerve, which consisted of—1. Injections of blood into its sheath and substance. 2. Ligature. 3. Division. From a careful historical survey of the subject Dr. Magnus concludes that though hæmorrhage in the optic nerve does not occur very frequently, still cases have been repeatedly met with in which its presence has been revealed by *post mortem* sections, and his references prove that such have been noticed so far back as 1830–32 by Weller and Mackenzie.

The cases in which the diagnosis of embolism of the central artery of the retina has been confirmed by *post mortem* examination are very few in number; we believe there are only four,(3) whereas the majority of the cases of apoplexy of the optic nerve have been demonstrated by *post mortem* examinations. If, then, it can be shown that most of the cases hitherto looked upon as due to embolism were in reality cases of hæmorrhage in the optic nerve, the conclusion must inevitably follow that the former is an extremely rare accident, whilst the latter is, on the contrary, comparatively speaking, of frequent occurrence.

The following are some of the principal results Dr. Magnus has obtained by his experimental investigations:—

Small extravasations of blood in the optic nerve produce very slight, if any changes in the fundus oculi. Nevertheless, at the moment they occur there is a decided pressure exerted on the adjacent nerve fibres, but the blood soon makes its way into the inter-fibrillar connective tissue, where it may quickly become absorbed. The author thinks that we have here a solution of the puzzling phenomenon of transitory attacks of blindness, so frequently observed to precede the final attack in the so-called cases of embolism of the arteria centralis retinæ.

An extensive hæmorrhage in the optic nerve is followed by changes of a much more important and serious character, for not only do the nerve fibres receive considerable damage, but the vessels are subjected to very excessive pressure, the result of which is to produce an anæmic condition of the retinal arteries and an engorgement of the veins.

Dr. Magnus thinks it may fairly be conjectured that frequently a thrombus forms at the spot where the vessel is ruptured, though of course it was impossible to prove this by experiment.

(1) *Treatise on the Diseases of the Eye.* By Carl Stellwag Von Carion, M.D. Translated and Edited by Drs. Hackley and Roosa. London: 1868.

(2) Op. cit.: p. 665.

(3) *Archiv f. Ophth.*: B. XII. A 1.

(4) *Traité Pratique des Maladies des Yeux.* Paris, 1868: p. 347.

(1) *The American Journal of the Medical Sciences*, Aprfl, 1874: p. 313.

(2) *Die Sehnerven-Blutungen.* Leipzig. 1874.

(3) Schweigger. *Handbuch d. Speciellen Augenheilkunde.* 1871.
Sichel. *Arch. de Physiol.* Paris, t. IV. 1872.
Smith, *Brit. Med. Journal.* April 4, 1872.
Nettleship. *Royal London Oph. Hospital Report.* Vol. VIII. Pt. I: p. 9.

When the arterial influx is greatly lessened, though not wholly cut off, very little blood will naturally reach the retinal arteries, the *vis a tergo* being at the same time greatly reduced and weakened. The consequence of this is a choking of the capillaries, which declares itself ophthalmoscopically by the engorged state of the vessels at the periphery of the fundus oculi. The veins on the other hand are compressed by the extravasation, and the blood they contain cannot flow off. If this continue for any time clots begin to form, the blood corpuscles becoming heaped together, and this accounts for the differences of colour so often noticed in different portions of the veins, the dark parts being those which contain the clots, the clear parts the plasma.

It was found necessary to employ ligature of the nerve in order to produce the well-known infiltration of the retina in the region of the yellow spot, for it was impossible to produce a sufficient effect by injections into the disc. The infiltration followed the injury to the nerve very quickly. The marked preference of the infiltration for the macula lutea and outer margin of the disc, may be explained by a peculiar arrangement of the optic nerve fibres. For, supposing the central fibres of the nerve are chiefly distributed to the region of the yellow spot, then as these are the first to experience the shock of the rupture of the artery, it is but natural to suppose their prolongations will be the first to exhibit the change; this will also account for the almost constant form the blindness assumes in these cases, namely, a sudden obscuration of the central portion of the visual field, which rapidly extends towards the periphery, where, however, a quantitative perception of light is generally preserved to a limited extent.

Microscopical examination of the affected portion of the retina showed that, at least at first, the infiltration was exclusively confined to the inner (optic nerve fibre) layer, the outer layers remaining perfectly intact. Dr. Magnus considers that this affords the true explanation of the peculiar and well-known appearance of the cherry-coloured spot in the macula lutea. The optic nerve fibre layer ceases to be a continuous layer at the macula lutea, consequently the opacity produced by the infiltration stops short at its circumference, and hence the brilliant red reflexion from the choroid shines, as it were, through a window (Fenster) in the globe. The effect of contrast may possibly have some influence in intensifying the colour of the spot, which was the explanation suggested by Liebreich, but as Dr. Magnus points out, it will not account for those cases where the infiltration is so slight as to cause a scarcely perceptible haziness of the surrounding parts, and yet this peculiar appearance of the macula is well marked.

The iris immediately after the occurrence of the hæmorrhage exhibits no marked change either in form or reaction. During the progress of the malady, however, it shows a decided sluggishness, which may extend even further to a complete loss of its reflex activity when directly stimulated, though it responds promptly in sympathy to the movements of the iris in the healthy eye. As far as we can see the following are the principal points of difference which, according to the author, render it possible to make a diagnosis between embolism of the arteria centralis retinæ and apoplexy of the optic nerve. For convenience they may be arranged thus:—

EMBOLISM OF ARTERIA CENTRALIS RETINÆ.	APOPLEXY OF OPTIC NERVE.
Sudden and complete blindness.	Sudden blindness (frequently preceded by transitory attacks) commencing at the centre of the visual field, and spreading rapidly towards the periphery, where, however, a zone frequently remains in which a quantitative perception of light is retained.
Well marked anæmia of the retinal vessels, *arteries as well as veins.*	Anæmia of arteries with hyperæmia of veins.
Infiltration of retina does not appear till some time, generally several days, after the accident. In Graefe's case it was fourteen days.	Infiltration of retina appears *very soon* after the attack.

The treatment of apoplexy of the optic nerve is eminently unsatisfactory. The principals on the whole must be similar to those which direct the treatment of apoplexies in other organs. Iridectomy, which was held in high estimation by Graefe for the treatment of embolism of the arteria centralis retinæ, is on good theoretical grounds contra-indicated in cases of apoplexy of the optic nerve, for the very considerable reduction in the intra-ocular tension which follows it, would in all probability induce a strong influx of blood into the retinal vessels, consequently there would be great danger of causing a fresh extravasation in the optic nerve.

Reviews.

The Diseases of Women. By FLEETWOOD CHURCHILL, M.D., Etc., Etc., assisted by FLEETWOOD CHURCHILL, Jun., F.K.Q.C.P.I. Sixth Edition. Dublin: Fannin and Co., 1874: pp. 879.

THE appearance of a sixth edition of a work on the Diseases of Women—an unprecedented event, we believe, in the literature of this subject—renders criticism of such a volume almost unnecessary: since the mere fact of another edition of Dr. Churchill's well-known work being demanded, shows the high estimation in which it is held by the Profession at large. No one treatise on Diseases of Women is perhaps so often quoted by writers on the same subject, or so frequently referred to for information, as that from the pen of our respected author; and that although the former editions of the work have been decried by some—with whom, however, we demur—as being but mere compilations and devoid of originality. We confess, nevertheless, that if there is one feeling more than another which strikes the reader of this new edition, it is a renewed sense of disappointment at the apparent indefiniteness of the writer's opinions (while fully giving those of others) as to the etiology, pathology and treatment of many of the subjects he discusses. This, while it might for some reasons be commendable in a first edition of such a treatise, by a diffident author of but limited experience, becomes rather a matter of regret when in a sixth edition of a work by a man of large experience and extensive practice, we find an absence of those authoritative statements for the guidance of the Practitioner and Student which it is so important to have, and which no one can question Dr. Churchill's right to make.

Ten years have elapsed since the publication of the fifth edition of Dr. Churchill's work, during which time the most important advances have been made in the study of gynæcology. We have compared the last with the present edition, and find that it contains but few additions worthy of note, while there are many omissions in it which, if the book were a new one, would require animadversion. In the chapter on Pelvic Abscess, Dr. Churchill gives (p. 142), a good description of peri-uterine inflammation or peri-metritis; a condition which is more frequent than is generally supposed, and which, he shows, may sometimes be occasioned by the employment of sea-tangle tents. In cases of membranous dysmenorrhœa, where the membrane is discharged, Dr. Churchill now recommends the application of strong tincture of iodine to the cervix,

and, when possible, inside of cervical canal. Endometritis, which in former editions was entitled uterine leucorrhœa, is now defined as consisting of "inflammation of the mucous membrane of the cervical canal and of the cavity of the uterus, either or both," and its local treatment, especially by the application of strong nitric acid, recommended. Clinically, Dr. Churchill considers the distinction between cervical endometritis (endocervicitis of Marion Sims), and that of the cavity, very important; but he nevertheless appears to doubt the possibility of the cavity of the uterus being alone effected (*sic*). Endometritis no doubt most commonly occurs in conjunction with endocervicitis; but we have reason to believe that it not unfrequently exists independently of that affection.

In the chapter on Fibroid Tumours of the Uterus, a short account is given, with a woodcut, of Dr. Kidd's method of dilating the os and cervical canal, and also a brief notice of Marion Sims' operation of enucleation. The administration of the chloride of calcium internally, or of ergotine hypodermically, in these cases is not mentioned.

Dr. Churchill describes, in the chapter on Polypus of the Uterus, a growth at the os uteri, which he is sure is often confounded with glandular polypi, but which is "a *vaseular* tumour exactly resembling those at the mouth of the urethra." He has seen eight or ten of these cases, and his treatment has been to snip them off with a pair of scissors, and subsequently apply strong nitric acid.

Dr. Churchill is, of course, a therapeutist of the old school; and although venesection is alluded to by him in connection with nearly every acute disease, still its use is not generally recommended. Mercurials, however, are in these (acute) affections invariably permitted. While in many cases lists of reputed remedies are given which have failed in the author's hands, several new medicines, the efficacy of which in uterine and puerperal affections has been ascertained by many competent observers, are passed over in silence: among such we need only mention hydrate of chloral and bromide of potassium in puerperal mania and convulsions; aconite and quinine in puerperal fever, and quinine in metrorrhagia.

We should not omit to state that the volume is now published in octavo, on good paper, and with large, clear type. It has several additional woodcuts, and a capital index; and while, for many reasons which we can easily conceive, it does not come up to the standard of knowledge or teaching of the day, it still forms, like the preceding editions, a most useful and comprehensive treatise on the important subject of Diseases of Women.

Manual of Public Health for Ireland. By T. W. Grimshaw, M.A., M.D., F.K.Q.C.P.I., Diplomate in State Med., T.C.D.; J. Emerson Reynolds, F.C.S., Prof. of Chemistry, R.D.S. and R.C.S.I.; R. O'B. Furlong, Barrister-at-Law; and J. W. Moore, M.D., F.K.Q.C.P.I., Ex-Scholar and Diplomate in State Med., T.C.D. Dublin: Fannin and Co.: pp. 336.

The excellence of this work is sufficiently guaranteed by the names of its authors, but the expectations with which we commenced its perusal were fully realized long before we reached the final chapters.

The subjects treated, include Law, Statistics, Disease, Food, Water, House Construction, Ventilation, Sewage, Contagious Disinfection, Meteorology and Climate, &c. In the opening chapters we find the various sections of the Public Health Act of 1874 (Ireland) thrown into an intelligible arrangement, and accompanied by useful notes, explanations, and comments; the duties of Medical Officers of Health fully set forth, as enumerated in the regulations of the English Local Government Board, and those of Sanitary Sub-Officers also fully detailed. A chronological and alphabetical list of statutes relative to Public Health in Ireland is very well arranged, and supplemented by a clear and copious index. In fact the first sixty-eight pages of the work forms a perfect *vade-mecum* of sanitary law, in which, in cases of difficulty, we have a ready means of ascertaining what the law is, and where it is to be found.

The chapters on Vital Statistics are at once elementary, and advanced. They contain much that is interesting, but more that is useful. The principles on which vital statistics are based, their uses, and the methods of framing them are clearly explained, and the highest authorities on the subject are freely quoted; whilst the all important subjects of births, marriages, and deaths are very ably discussed in their relation to civil economy, and their influence on the welfare of communities. In giving, at page 74, Poisson's rule for calculating the limits of error in drawing averages, the authors have omitted to state that it is 212 to 1 that the mean chance will be within the limits given by the calculation.

The chapters on preventable and controllable diseases are admirably written, and contain many striking facts relating to the damage inflicted by such diseases, their mode of origin and propagation, and their prevention and control. The accounts of the localized outbreaks of fever depending upon sewage contamination of water at Terling, Guildford, and Winchester are well worth reading and remembering; and so is the account given of impure milk as a cause of typhoid. The facts contained in these chapters must be confusion to those sceptics, who ignorantly laugh at the opinions of our educated and experienced medical sanitarians. The whole subject of disease, from a sanitary point of view, is most instructively presented to the reader, and we are sorry that limited space forbids our making extracts.

On the subjects of food and dietary we find very useful information under the heads of—meat, poultry, vegetables, fruit, sugar, flour, bread, milk, butter, tea, &c., such as the means of detecting impurities, adulterations, and deleterious changes; and the effectiveness of the means recommended is not a whit lessened by their simplicity. A whole chapter is devoted to the analysis of water, and a sequel to it will be found in Appendix II., describing the special reagents for water analysis, and enumerating all the apparatus required.

The chemical instructions in the work render the making of a common analysis quite an easy matter. We have not here that prolixity of chemical minutiæ suited only to first-class chemists in first-class laboratories, but just so much—and no more—as the medical officer of health requires, an officer who most likely is neither an experienced chemist nor a medical jurist. We think that the position, and the requirements of such officers, have been very considerately thought over by the author, with the result of his compiling for them a really useful and valuable guide.

The chapters on meteorology and climate may be called erudite, and discover in their author a familiarity with the subject which few medical officers either possess or require. We fear that few of them have the instruments necessary to profit by the information conveyed. The Chapters are very interesting, and would have been omitted with loss to the manual.

The book closes with a chapter on the influence of seasons on cholera, smallpox, measles, whooping cough, scarlatina, typhus, enteric, and simple continued fevers. It contains many interesting facts, such as, the arrest of the spread of measles in summer by the rise of the air temperature above a mean of 60°, while towards winter a fall below 42° tends to check it; the spread of

whooping cough with a rise above 57° mean temperature, whilst extremely high temperatures are inimical to its epidemic character; the prevalence and fatality of scarlatina in the fourth quarter of the year, whilst a fall of mean temperature below 53° tends to arrest it; &c., &c.

In Appendix I. we have tabulated particulars as to the area, population, number of inhabited houses, and ratable value of forty-two towns in Ireland; and an alphabetical list of its rural sanitary districts, with similar information.

We congratulate the authors on the success which crowns their intention and efforts to produce, not only a useful, but an indispensable work for officers of health. Extensive research, practical experience, and industrious labour have evidently been brought to bear on its preparation, and we strongly recommend it, even to those who are already the owner of much more voluminous publications on the same subjects.

The Philosophy of Voice: showing the Right and Wrong Action of Voice in Speech and Song. By CHARLES LUNN. London: Ballière, Tindall and Co. 1874: pp. 72.

THIS is a work as to the value of which, we think, the author and his readers will differ very seriously in opinion. Mr. Lunn expects that, "as all advanced thought invariably does," his views will meet with opposition, but that truth will ultimately prevail, and that their acceptance will confer great, very great benefit, not only upon musical art, not only upon public orators, but, above all, upon the suffering and the enfeebled, whose debilitated health may thus be strengthened and chest disease swept in great part from our shores.

The expectations of Mr. Lunn's readers will fall far short of these.

We do not think that either musicians or singers will accept the doctrine that the true position of voice culture is as a branch of surgical rather than as a branch of musical art, and we are quite sure that physiologists will not admit that the theory of voice production can be argued "on purely abstract principles," without an appeal to experiment, and the observation of the living larynx.

On the whole, we fear that this work will not add much to the reputation of its author, or exert that great and salutary effect on the world that he anticipates. Indeed it is not impossible that some future writer may even place it among "the random writing and still randomer talk," which, within the last few years, "has taken place upon the question of the voice."

Correspondence.

PARIS.

FROM OUR OWN CORRESPONDENT.

Professor Broca on Shampooing in the Treatment of Sprain—Its Modus Operandi, Indications and Counter-Indications — Professor Depaul's Obstetrical Clinic—The Nature and Treatment of Cephalematomata—The Differential Diagnosis between these and the "Caput Succedaneum," or "Bosse Sanguine" of the French.

IT is curious to observe that, while on the one hand gigantic strides are being made in experimental therapeutics, the art of healing seems on the other to be going back to the primitive days of the existence of man, when medicine as a science was unknown, and when the ills to which mankind was subject had to be cured by the primitive means at their disposal, which were obtained from herbs and minerals in their natural state such as they are even now employed by our savage contemporaries, and by the peasantry of the most civilized countries in the world. I have been led to these reflections from having read in a Medical Journal that our American confrères employ mother-earth in the form of common clay in the treatment of fractures, ulcers, and a variety of other cases. Those who have been in India will have seen that potter's clay is by the natives employed externally for all sorts of pains and aches, and the internal remedies consist principally of wild herbs.

Another example of the tendency that prevails to return to primitive measures in the treatment of disease, whether spontaneous or brought on by accident or injury, was lately noticed in Professor Broca's Ward at the "Hôpital des Cliniques." The case was that of a sprained ankle, in which M. Broca employed shampooing, or, as the French term it, "massage," with the best results. He does not believe in the efficacy of absolute rest in sprains, and attaches greater importance to shampooing than is generally accorded to it by Surgeons. Its omission in ordinary practice, he said, was much to be regretted, and it would in some measure account for the success of "rebouters" (bone-setters) who infest the Provinces and employ this mode of treatment to a great extent, almost to the entire exclusion of rest, so much insisted on by regular Surgeons, not only to the prejudice of the patient's health but of his purse, and, in the case of a workman, perhaps of his livelihood for a time. M. Broca expressed his surprise that the subject is so lightly treated in some classical works, while others do not even mention it as a remedy for sprains or any other malady; he therefore took occasion to explain what shampooing was, and its mode of action in the treatment of sprains, &c., as follows:—"Primary Shampooing," he stated, consisted of pressing or kneading the swollen tissues with the fingers; then of alternately flexing and extending the joints affected. By this pressure and forced motion, the extravasated liquids are dispersed into the subjacent cellular tissue. After the first shampooing, the pain and swelling return, but on the second day, when the operation is repeated, its effects last much longer, the pain is diminished, and, after a few days, during which the operation is regularly practised, the pain and œdema disappear completely. "Secondary Shampooing" is applicable to cases that had not been treated or imperfectly so in the first instance, and in which the pain, swelling, and inability to move have persisted. In such a case, he would begin with gentle frictions, which are to be gradually increased, and to be applied to the most painful parts.

The counter-indications against this mode of treatment consist of acute inflammation of the parts; as in such a case the operation of shampooing would not only be intolerable but would increase the inflammation. In all cases of sprain the utmost care and attention should be paid with the view of forming a diagnosis, as it would be unpardonable in any Surgeon shampooing a fractured limb, a practice not infrequent among quacks and bone-setters. In case of doubt better treat the patient upon ordinary principles than to resort to the cruel and unscientific method of shampooing under such circumstances. M. Broca then described the process of the operation. After each sitting he applies a roller steeped in Goulard or some other resolvent lotion, and enjoins rest, absolute or otherwise, according to the nature of the case.

On quitting M. Broca I walked to the lying-in Ward under the care of Professor Depaul, where I saw a number of interesting cases. I cannot in a single letter even attempt to give short notes of them all, so must content myself with selecting one or two of the most interesting amongst them. At this clinic, M. Depaul

presented a child only a few days old with a tumour on its head to which he gave the name of cephalematoma. This he defined as a tumour situated on the skull, and consisting of extravasated blood between the bone and pericranium. He added that a cephalematoma must not be confounded with the "caput succedaneum," improperly termed "bosse sanguine" (sanguineous tumour) by the French, which is observed in lingering labours. Both tumours are quite different in their anatomical and clinical characters; the caput succedaneum is situated in the subcutaneous cellular tissue, whereas the cephalematoma is situated between the bone and pericranium; in the former, the skin is of a violet hue and infiltrated, in the latter, on the contrary, the colour of the skin is unaltered, as may be seen in the case under notice. It may, however, happen that a cephalematoma and a caput succedaneum may co-exist at the same place; in this case, the distinctive characters of both the tumours will be noticed. The cephalematoma has nothing to do with the skin; it is formed by the detachment of the vessels that unite the bone with the pericranium, and this would explain why the colour of the skin undergoes no change. The cephalematoma presents itself ordinarily under the form of an indolent, circumscribed, soft, and fluctuating tumour. The fluctuation in the present case is very manifest, and, added to this, we have a sign which is very important in the diagnosis of this sort of tumours, a sign which may be considered almost pathognomonic of a cephalematoma; in exploring this tumour, a hard, osseous circle is felt around it, which may lead one to suppose that the central portion of the bony plate, over which the tumour is situated, is worn and perforated, and that there is a hernia of the brain, with or without its membranes.

In the case under notice, the tumour is situated on the right parietal bone, which would appear to be the bone of predilection for this affection. It is of an oblong shape, which is rather unusual, as cephalematomata are generally of a kidney or bean shape; but, it must be added, continued the learned Professor, these tumours sometimes assume a triangular or other form. According to this description, there can be no doubt that the tumour on the head of the child in question is a cephalematoma.

Besides the above characters, another circumstance contributes to the confirmation of the diagnosis. The tumour did not exist, or rather was not apparent, when the child was born, but showed itself only after a certain time, which is generally the case with this class of tumours; or it would perhaps be more correct to say, that at the birth of the child, the tumour is so small that it is scarcely visible; sometimes, indeed, it does not exist at all, and is found after birth. When once found, the tumour goes on increasing in size for some days, which is the reverse of what takes place with the caput succedaneum, which, at the birth of the child, is at the height of its development, and generally disappears in twenty-four or thirty-six hours, leaving on the skin a slight degree of ecchymosis.

As to the etiology of these tumours (cephalematomata), M. Depaul states that there is a diversity of opinion, some contending that they are due to disease of the bone, while others believe that they are brought on by the detachment of the pericranium, the result of a lingering labour, and the unequal pressure exercised by the maternal parts on the head of the child during parturition. M. Depaul is in favour of the latter theory, which fully explains the *rationale* of the formation of these tumours, as cephalematomata generally occur on that side of the pelvis, which is comparatively empty, and it is probable that they are produced at the same time as the caput succedaneum.

In the former case, the blood, owing to the unequal pressure, is driven to the parts where there is the least resistance—in other words, congestion is produced, which ends in rupture of the blood vessels, and it is this extravasation of blood which constitutes the cephalematoma. This, however, is mere theory, though the present case would seem to give it an air of plausibility, as the tumour is found to exist on the right parietal, and it is just that part of the skull which, during labour, corresponded to the part where there was the least pressure.

The prognosis of cephalematomata is in general favourable, although much has been said to the contrary, and they generally get well without any medical or surgical interference. M. Depaul left the case to nature, and merely applied a lotion of wine and water, not with the hope of its dissolving the tumour, but to show the mother that something is being done to make it disappear.

The treatment then is simply one of expectation, and M. Depaul strongly depreciates the practice of opening these tumours, which is attended with real danger. In general, these tumours disappear spontaneously after a lapse of from three to six weeks, and sometimes even longer. When left to themselves, the extravasated blood becomes enveloped by a thin, osseous shell, and after a certain time, the whole is absorbed and disappears.

M. Depaul concluded by relating the case of a woman he had delivered several times, all of whose children presented cephalematomata which disappeared after a short time. He has seen these children up to the age of five or six years, when not the slightest trace of tumour was to be found on their heads.

Extracts from Journals.

ON THE ACTION OF AMYL-NITRITE ON THE VASCULAR TONUS AND ON THE HEART BEAT.—Dr. W. Filehne finds, as most other experimenters have done, that the inhalation of amyl-nitrite causes a considerable dilatation of the blood vessels of the head and upper part of the body. From a review of former experiments he concludes that the mechanism of this dilatation (*i.e.*, whether it is due to an action on the vessels themselves or on their nerve centres) is still a matter for investigation. He adduces as an argument against the direct action on the vessels the fact that only some of these are dilated, and that the limits of the area of vascular dilatation are pretty sharply marked. If, then, the vessels were affected by the local action of the nitrite it would be difficult to explain how neighbouring vessels, through which the same blood was passing, should react so differently. Again, if the vessels were directly affected, those of the lungs, by which the absorption occurs, ought to be most dilated. But having made a window in the chest wall of a rabbit, sparing the pleura so as to avoid entrance of air, Filehne saw no change of colour of the lungs to follow inhalation of amyl-nitrite, although the vascular dilatation in the vessels of the ear was extremely marked. He considers the question is settled by the following ingenious experiment:—The sympathetic was divided on one side in the neck of a rabbit. The vessels of the ear on that side dilated. The upper segment of the divided nerve was then irritated by an induction current of such strength that the vessels were brought into a condition of mean contraction, so as to equal in size those of the sound side. Amyl-nitrite was then administered through a tracheal fistula, so as to avoid the spasm of respiration produced by its contact with the nares. Immediately the vessels of the sound side dilated, while those on which the divided nerve was being irritated remained unaffected. By this is shown that the action of amyl-nitrite is not on the vessels, nor on the nerves, but on the nerve

centres. The effects of amyl-nitrite on the heart was found to be different in frogs and in mammalia. In both classes of animals a *large* dose caused slowing and feebleness of action. A small dose in frogs produced no effect, but in mammalia (men, rabbits, dogs) a very considerably increased rapidity was noticed. That this was due to a paralysing action on the vagus centre in the medulla-oblongata was shown by a somewhat similar experiment to that noticed above. The author divided both vagi in the neck of a rabbit, and then Faradised the lower end of one of them with a current of such strength that the rapidity of pulsation of the heart was the same as before the operation. Then amyl-nitrite was administered, and, although the effect on the vessels of the ear was well marked, no increase in the cardiac pulsations occurred. The difference in the effects of the drug on frogs and mammals is explained by the absence of a *constant* inhibitory action of the vagus on the heart in frogs. If in these animals the vagi be divided, no increase in the number of pulsations occurs, while such an increase always occurs in warm-blooded animals, showing that, in them, the vagus is constantly in action. The increased rapidity of respiration which follows inhalation of amyl-nitrite is supposed not to depend on a direct influence exerted on the respiratory nervous centres, but to be due secondarily to the alterations in the vascular tonus and the cardiac action. A paralysing action on the vaso-motor centres of the head and neck and on the vagus centre, similar to that caused by amyl-nitrite, is produced in men by mental emotion, such as shame, or timidity, which is accompanied by blushing and increased frequency of pulse. For interesting remarks on this similarity of effect, and for a criticism on former experiments, we must refer to the paper itself.—*Pflüger's Archiv.* IX. 470. J.M.P.

Brain Affections during the Early Stages of Syphilis.—Among the recent facts that have been ascertained regarding the natural history of syphilis none appear to be better established than those showing the possibility that any organ of the body may be affected during the early or later periods of the disease. Lang has collected a number of cases of syphilitic lesions of the brain, and deduces from them the following points of diagnostic value:—1. Headache is an important symptom in cerebral disease of syphilitic origin. Those pains that are localized at certain points and have a nocturnal character are apt to be associated with the later forms of the disease; in the early periods the pain is apt to be diffused. 2. Attacks of dizziness are among the early symptoms, and probably are dependent in most cases on hyperæmias of the brain or its membranes. 3. Paralyses are apt to occur suddenly during the early periods of syphilis, with or without loss of consciousness; apoplectic attacks in persons about the twentieth year point rather to syphilis than to other causes. In the latter periods of the disease paralyses develop gradually, spreading over the muscles; in very advanced cases mental disturbances may also be associated with the disease. Paralyses of certain groups of muscles appear at both periods; the muscles of the eye are more frequently affected in the early periods, and the facial muscles in the later periods. Paraplegias are apt to appear early, and hemiplegias late. 4. Epilepsies after syphilis are generally connected with old cases of syphilis, and they rarely, if ever, are known before the thirtieth year. 5. Anomalies of the nerves of sensation have seldom been noticed. 6. Weakness of memory, impairment of mental vigour and intelligence, appear both early and late. 7. Mental disturbances have only been observed in the later periods. The few autopsical records of these diseases show that in the early stages inflammation is most apt to attack the more delicate membranes of the brain; encephalitis, with or without arachnitis, is less frequent, while inflammation of the dura mater is quite rare, and only occurs under the form of pachymeningitis interna. There may also be, at first, as stated before, hyperæmias of the brain and its membranes. In the later stages pachymeningitis externa has been most frequently observed; there may also be inflammation of the brain and its membranes, usually excited by the presence of gummy tumours; then there may be gummy tumours alone, and finally it is likely that there is an affection of the cerebral vessels, the nature of which is still obscure.—*Rundschau*, and *N. Y. Med. Record.*

On the Electricity in Cases of Anteflexion and Retroflexion.—M. Tripier was led to employ electricity in the above cases by observing that in a case of encysted hydrocele of the cord, the spermatic artery could be felt pulsating as long as the electric current was being applied, but not at any other time; from this he concluded that the electric current produces a state of hyperæmia during its application. Also, since the contraction of a muscle is what determines the amount of its nutrition and consequently of its growth, if it can be incited to contract, the amount of its nutrition can be increased. If therefore it were possible to localise the electric current to one or other wall of the uterus, that part would be incited to contract, and so counteract a flexion in the opposite direction. The increased stimulus to nutrition would, at the same time, tend to lessen the congestion. With this object in view, M. Tripier has had a sound constructed with a curve corresponding to that of the sacrum. At its extremity is an olive-shaped knob, the stem being isolated. This can be passed into the rectum and the extremity brought into contact with the posterior wall of the uterus. A similar sound, but without the sacral curves, is now passed into the uterus, and when both sounds are connected with a battery, the current passes through the posterior wall of the uterus causing it to contract, and thus lessening any anteflexion that may be present. In cases of retroflexion the second sound is passed into the bladder and placed against the anterior wall of the uterus; the result being that any retroflexion present is lessened. In both cases the uterine sound is connected with the negative pole of the battery. The pain experienced by the patient is of two kinds: first, that caused by the sensibility of the mucous surfaces to the electric current, and second, that caused by the contraction of the uterus which being generally the more severe masks the first. M. Tripier has never known inflammation caused by this proceeding, or the pains to persist after the circuit has been broken. The uterine contractions do not commence the moment the circuit is established. At the commencement the current should not be strong, but should gradually be increased till uterine action is aroused. As soon as this takes place the current should be maintained at the same intensity for about three minutes. The sittings should be commenced about fifteen days after a menstrual period, and continued daily during the first month till the period. During the second month the sittings may be less frequent. Fever contra-indicates the use of electricity, as the pains are then very severe. In cases of simple congestion relief has usually followed the second or third sitting. Absolute rest is not essential; on the contrary, exercise is beneficial to the patient, and any fatigue felt will be removed after the application of the electric current. —*Gazette Obstét.*, July 5, 1874. A. V. M.

Differentiation of Intestinal Invagination.—Dr. O. Leichtenstein, in an article on invagination (*Archiv. f. Prakt. Heilk.*, 4, 1873), refers to the following points for the differentiation of invagination of the small from that of the large intestine: 1. Invagination of the small intestine but rarely occurs during the first year of life, as also rarely during childhood in general. 2. In adults, the course of the attack in invagination of

the ileum is more rapid, the phenomena more severe than in ileo-cœcal and colon invaginations. Chronic cases are rare in invaginations of the small intestine, more frequent in those of the ileo-cœcum and colon. Severe symptoms of collapse occur more frequently in the beginning of the disease. 3. Muco-sanguinolent discharges are the rule in all invaginations, whatever their seat. Fecal evacuations, entirely normal in character (after preceding diarrhœa), were observed in ileo-cœcal invaginations, once in a colon invagination, the patient being an adult. 4. Meteorism is a very variable symptom. It is usually absent in ileo-cœcal invaginations. In invaginations of the descending colon, it was frequently recognized as affecting the transverse colon, and subsequently spread over the whole abdomen. In invagination of the ileum it was occasionally found to be confined principally to the central abdominal region, with exemption of the lateral portions and epigastrium. 5. Tenesmus is rare in invagination of the ileum, frequent in that of the colon and ileo-cœcum. 6. The tumour is usually absent in ileum invagination. Its seat in the centre of the hypogastrium speaks for this variety; when situated in the cœcal region, especially when it remains stationary for some time, it indicates ileum or ileo-cœcal invagination. The spread of the tumour, when occurring suddenly and corresponding to the course of the colon, speaks more for ileo-cœcal, less for colon invagination and excludes ileum invagination. The seat of the tumour in the left lateral portions of the abdomen would indicate ileo-cœcal or colon invagination. The tumour can never be felt in the rectum, and prolapse through the latter never occurs in uncomplicated ileum invagination. Changes in the consistency, occurrence, and disappearance of the tumour were especially observed in ileo-cœcal invagination.—*N. Y. Med. Journal.*

Spontaneous Gangrene.—Dr. Abraham Kidd, of Ballymena, recently reported in the Irish Hospital Gazette (Oct. 15, p. 312), an interesting case of idiopathic gangrene of the arm affecting a healthy farmer, aged 45. M. Dujardin-Beaumetz has also observed in the Hopital de la Pitié, a somewhat similar case which he has lately laid before the Société Médicale des Hôpitaux (*Gaz. Méd. de Paris*, Oct. 31). The patient was a very anæmic young man, aged 18 years, a scullion by occupation. On the night of the 7th–8th of June, he was suddenly attacked with mortification of the right hand and forearm. The first symptom ascertained was an absolute loss of the power of motion; then followed some swelling and very acute pains. Three days later all the characteristic signs of loss of vitality in the greater part of the forearm and in the hand set in. The arterial pulsations had disappeared in the entire forearm and hand, and the pulsations of the axillary artery could scarcely be perceived in the axilla; in all other parts of the body the arterial system was intact. There was nothing wrong with the heart, with the exception of a slight, anæmic *bruit de souffle*. All the other organs were healthy. Upon the 1st July, the line of demarcation was formed between the sphacelated parts. Very soon, fever, diarrhœa, and epistaxis supervened, and these symptoms became so urgent that M. Verneuil, who was consulted, believed that the separation should be hastened by amputating the dead portions from the healthy parts. Both before and after the operation, M. Dujardin-Beaumetz had had recourse to continual chloral baths. Cicatrisation proceeded rapidly, and the patient was soon completely cured. In making this communication, M. Dujardin-Beaumetz called particular attention to two points:—the cause of this affection, and the treatment which had been employed. As regards the first point, M. Dujardin-Beaumetz, taking into account the rarity of the phenomenon at this age (18 years), the sudden appearance of the symptoms, and the complete cessation of pulsation in the brachial artery, thinks it may be asserted that an embolic obliteration was formed in the upper portion of the vessel. But he does not pronounce upon the point of departure of this embolon. He remarks, however, that the absence of physical signs of cardiac affection may co-exist with a vegetating or ulcerative endocarditis, as was proved by a case he has recently observed. But the youthful subject of the above case had never had rheumatism or intermittent fever; he was not addicted to alcohol, and had never complained of his heart. M. Dujardin-Beaumetz appears strongly disposed to admit that in this case the alteration in the blood resulting from the patient's extreme anæmia, had favoured the formation of depôts of fibrine in the heart or in the large vessels, and thus produced a veritable inopexia(1). As to the treatment before and after the operation, it was necessary to seek to combat the symptom of putrescence, and it was with this object that M. Dujardin-Beaumetz, remembering the results he had obtained as regards the antiputrid properties of the drug, had had recourse to the chloral baths. In this case continual baths in a chloralized solution, from 1 part to a 1,000th, to 1 to a 50th, gave very good results. According to M. Dujardin-Beaumetz, they produced an absolutely complete disinfection: they favoured, in an indubitable manner, the granulation of the parts laid bare by the separation of the sphacelated portions; and, finally, they prevented, in a certain degree, serious septicæmic accidents. M. Brouardel does not admit so readily as M. Dujardin-Beaumetz, the embolic origin of this spontaneous gangrene. He has never seen œdema after spontaneous obliterations of arteries; and would be rather disposed to place this case along with certain other cases of gangrene recently published under the name of *gangrene foudroyante.*

Malformations of the Lungs.—Klebs (*Aerztl. Corr.-Blatt.*) says that we meet with the following anomalies of the lungs: 1. Absence of both lungs. 2. Complete development of one lung and rudimentary development of the other. 3. Rudimentary development of both lungs. A lung arrested in its development shows no signs of lobes, and may possibly be unconnected with the bronchi. A further anomaly is the abnormal insertion of such a rudimentary lung. He alludes to a specimen which he had seen, where the right lung was represented by a body not larger than a hazel-nut, and was attached to the œsophagus, just above the diaphragm, and proved, on careful examination, to be made up of lung tissue. Generally a rudimentary lung is inserted like the normal lung. The results of his observations had been that where a single lung was deficient it was the right one, in eight out of ten cases, and the pleural cavity was then occupied, on the right side, by the heart and a certain amount of connective tissue. The causes that produce such deficiencies may be due to a mechanical arrest of growth. The anterior end of the body, during the first four weeks of fœtal life, is turned from right to left by the development of the amnion. Consequently, the tension of the amniotic membrane will exert its influence on the organs of the right side anteriorly, and will retard their development. The absence of the kidney, in the same instances, on the opposite side, is explained on the same hypothesis; for while the anterior end is turned to the left, the posterior end is turned to the right, and there must be tension of the parts on the left side posteriorly, which accounts for the atrophy or absence of the kidney.—*N. Y. Med. Record.*

Treatment of the Colliquative Sweating of Phthisis.—The colliquative sweats which so rapidly weaken phthisical patients, and are so disagreeable to them, have necessarily attracted the notice of

(1) Ἴς ἰνός a fibre, and πῆξις concretion.—Ed. I.H.G.

physicians, and a great number of remedies for this symptom have been cried up. Rayer praises white agaric [Boletus laricis], which he thus gives:—℞. White agaric, gr. xv; ext. opii, gr. ¼.—M. Divide into six pills. One, or two, at night. Rodolphi employs the following formula:—℞. Sodæ bicarb., gr. viij; sulphur. sub., bismuth. subnitr., āā gr. ¼. For a powder. One powder every two hours. He also recommends warm alkaline lotions made with:—℞. Carb. potass., ʒiijs; alcohol., ʒiss; aquæ, ʒxvss. Charvet has warmly praised tannin. His formula is:—℞. Tannin. gr. xv; confect. rosæ gall., q. s. Divide into 36 pills. One to four every night. M. Woillez gives four pillules of gr. iij of tannin two hours before each meal. He sometimes adds extract of rhatany, in doses of one drachm, in a julep. Beau, who believes in an antagonism between phthisis and saturnine intoxication, has vaunted preparations of lead either in pills, as:—℞. Acetate of lead, gr. xv; white agaric in powder, gr. viij. Syrup of opium q. s. for ten pills. From one to four daily. Or in powders:—℞. Acetate of lead, opium, āā gr. viij; sugar, ʒss. Divide into twenty powders. One powder night and morning. Oxide of zinc may also be had recourse to:—℞. Zinci. oxid., ext. hyoscyami, āā gr. iij. To be taken when going to bed. Lately, Drs. Bourdon and Chouppe have insisted upon the employment of ipecacuanha in the sweats of phthisical patients. M. Lasegue has obtained remarkable results from general baths, by no means prolonged, but at a moderate temperature (about 35° Cent. = 95° Fahr). M. Gubler, when he has no reason to apprehend albuminuria (a rare occurrence in phthisis), praises the employment of diuretics as a remedy in these cases of phthisical sweating. He gives the patient a wineglassful, daily, of *vin diuretique*. M. Landrieux prefers the diuretic wine of the Charité Hospital(1) to that prepared according to Trousseau's formula,(2) in consequence of the former containing bitter, astringent, and aromatic substances.—*La France Médicale*, Oct. 14.

The Treatment of Varicocele by the Hernia Truss.—Hernia or the wearing of a truss have often been assigned as causes of varicocele. But Dr. Ravoth (*Berlin Klin. Wochensc.*, 19, 1874), states that in 1,500 cases of inguinal hernia that have come under his observation he has never seen a single instance of well-marked varicocele. This remarkable circumstance not only disposes of the conjecture of any causative relation between hernia and varicocele, but to Dr. Ravoth suggested the idea of a curative one. Amongst these 1,500 cases it is natural to suppose that there were originally a certain number of cases of varicocele, which may have been cured by means of the pressure made by the hernia and truss. Acting upon this suggestion Ravoth has treated twenty-eight cases of varicocele, simply by directing the patients to wear the truss usually employed for inguinal hernia. He directs the truss to be worn during the whole daytime and laid aside at night. For two or three hours the full force of a strong spring is allowed to press upon the spermatic veins at the inguinal entrance, and during the remainder of the day only a moderate, though still perceptible, degree of pressure is maintained. What the *rationale* of the treatment may be is uncertain, but of its success the writer has no doubt. The immediate effect is thus described: "Under this pressure the varicocele is seen immediately, and even visibly, to grow smaller, and whatever pain may have been present at once disappears. This can be explained only by supposing that the circulation in the veins is accelerated; at the same time the testicle is drawn upwards towards the inguinal ring, which is manifestly due to irritation of the cremastes, an effect of no little importance." The writer also thinks that the same remedy may be found of considerable service in meeting two other indications, viz.: the varicose veins of the legs and "the annoying irritation of the genitals which shows itself in inordinate emissions and onanism." His reasons for this opinion are mainly theoretical, but a certain amount of experience also seemed to justify it. For the treatment of the varicose veins of the leg he directs the pressure to be made just below Poupart's ligament over the vena cruralis at the point of junction with the saphena.—*N. Y. Med. Record.*

(1) Cort. cichon., Winteran., limon., āā ʒij; rhus. toxicodendr., scillæ, cacumin., angelicæ, āā ʒss; fol. absinth., meliss., āā ʒi; bac. junip., macis, āā ʒss; vin. alb., Oviij. Macerate and filter.

(2) White wine, Oj; juniper berries ʒiss; squills, gr. lxxx; digitalis, ʒiiss. Macerate four days, and add acetate of potash ʒiv. Filter.—[Ed. I.H.G.]

Compression in Hydrarthrosis of the Knee.—Dr. Maurice Langier (*France Médicale*, No. 97) directs attention to the success which has attended the treatment of this affection by the plan of compression adopted by M. F. Goyrand. Instead of applying the force directly to the whole knee, which is irksome and painful, he places the limb upon a splint, which only leaves the anterior part of the joint uncovered. Sheets of wadding are applied to the knee, and form a thick bed for it. The limb is then fixed by a bandage, which includes in it the splint. By this means the compression is borne upon the anterior part of the knee, the posterior and lateral portions being protected by the splint. M. Langier selects two cases from many in which the result was satisfactory, a cure being effected in one instance in ten, and in the other, twenty-three days.

W. T.

Villate's Mixture.—This mixture is sometimes used as an application to old standing sinuses. The original formula of the mixture is as follows:—℞.—Liq. plumbi subacetatis, ʒj.; Zinci sulphat. cryst., Cupri sulphat. cryst., āā ʒss.; Aceti vini albi, fl ʒvjss.—M. Dissolve the sulphates of copper and zinc in the vinegar and then add the subacetate of lead. Shake before using. In a case under treatment in the Bellevue Hospital, New York, of a sinus simulating disease of the hip-joint, injections, containing one part of the mixture to four of water, were applied to the sinus every third day, each injection being carefully washed out with water. After a week or ten days the thigh was very much swollen, and this was attended with considerable constitutional disturbance. This readily passed away, and it was found that the sinus had sloughed out, leaving a healthy granulating surface, which slowly healed. It is well to begin with a more dilute solution than was used in this case, in order to avoid the risk of extensive sloughing. —*N. Y. Med. Jour.*

Ingrowing Toe-Nail.—Professor Sayre says (*N. Y. Med. Record*, Sept. 1), that immense relief can be afforded by applying a few threads of cotton beneath the cutting-edge of the nail, in such a manner as to protect the excessively tender tissues from the irritation produced by being crowded in contact with it. When the cotton is properly applied, pressure upon the ball of the toe will give no pain. The proper instrument with which to apply it is a narrow thin knife-blade without cutting edge. With this instrument draw a few threads of cotton down between the nail and the mass of granulations, and so on until they are carried beneath the cutting-edge of the nail. This operation will give some pain during its performance, but the relief which will be afforded by it will be most marked. After the application of the cotton, pencil the fungous granulations over freely with nitrate of silver, or with whatever may be used for the purpose of destroying them. Repeat the application as often as the destroyed tissues separate, until the exuberant growth is all destroyed.

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, January 29th, 1875.

ROBERT McDONNELL, M.D., F.R.S.,
President, in the Chair.

Elephantiasis Arabum.

DR. W. J. WHEELER presented the specimen of which a description was given in the Report of the Proceedings of the Surgical Society in the GAZETTE of December 15, 1874.

Excision of Knee-Joint.

Mr. HAYES exhibited the portions of bone removed in two cases in which he had recently performed this operation. The first case was that of a girl, æt. 18, who eight years previously had been thrown out of a cart and had alighted on her left knee. Symptoms of acute inflammation of the joint shortly after set in, and the usual palliative and general treatment having been practised without any beneficial results, Mr. Hayes excised the joint; the articular cartilage of the tibia appeared normal; the external condyle of the femur was eroded, and there was a stratum of large blood-vessels evident beneath its cartilage; the inner facet of the patella was covered with a layer of distinct fibres, and there was a small additamentary bone just below the articulation. The synovial membrane was in an extreme state of pulpy degeneration. The second case also occurred in a girl aged 18. Four years previous to admission into Hospital she fell on her left knee. Startings of the joint, acute pain, and hectic soon supervened; and all other treatment having failed to give any relief, the joint was excised. This specimen presented a greater amount of disease than the former one; the cartilages of the tibia, femur and patella being extensively eroded, and the synovial membrane also was greatly altered.

Pleuritis—Hydropericardium ex vacuo.

Dr. NIXON exhibited the thoracic viscera of a man, æt. 25, who had been admitted into Hospital suffering from right pleural effusion; the heart was displaced to the left side; but this Dr. Nixon considered, *ante-mortem*, due rather to an adherent pericardium than to the pleural effusion, as there was no enlargement of the right side. Bronchitis having set in, and the symptoms becoming urgent, paracentesis was performed in the sixth intercostal space, a little in front of the axillary line. After four and a-half pints of clear serous fluid had been removed the operation was suspended in consequence of the patient beginning to cough and feel weak. Vomiting, which lasted for three hours, set in soon afterwards; the breathing became very rapid and difficult; the pulse rose to 150, and the patient died the same night. The pleura was greatly thickened, and there were from three to four quarts of serous fluid in the right side. The heart for about three-fourths of its surface was intimately attached to the pericardium by dense lymph, and there were eighteen to twenty ounces of bloody serum in the remaining portion of pericardial sac. Dr. Nixon would explain the phenomena in this case by supposing that the withdrawal of fluid by creating a vacuum, and removing pressure from the lung, caused a collateral hyperæmia of it, and for the same reason a hydropericardium *ex vacuo* was also formed. The hæmorrhagic character of the pericardial fluid was manifestly due to the nature of the lymph effused.

Myeloid Tumour of Maxilla (Giant-celled Sarcoma.)

Dr. R. McDONNELL exhibited a tumour he had removed on the 8th of August last from the lower jaw of a boy aged 11. Eighteen months previously the patient noticed a small growth at the root of the left canine tooth. This increased slowly at first, and then more rapidly, until it engaged almost the entire lower jaw. The tumour felt hard and dense except at one point. There were some teeth loosely embedded in it, and others had fallen out previously. The tumour was entirely painless. Clinically it was evidently of the myeloid class, and due to an expansion of the bone. The microscopic characters of the growth were those of the giant-celled sarcoma of Virchow, viz., a variety of sarcoma containing very large cells filled with smaller ones, the large cells being supplied with many processes or offshoots. These giant-cells occur normally in the medulla of fœtal bones, and are the largest protoplasmic collections met with in man. Having alluded to some other histogenetic characteristics of these growths, Dr. McDonnell remarked that Klein, in his work on the Lymphatic System, says he has several times come across, in the normal as well as the chronically inflamed omentum, endothelial cells which presented the characters of giant-cells, an observation which Dr. McDonnell considered of considerable importance.

Fracture of Skull.

Prof. BENNETT laid on the table the skull of a man, aged 67, which presented a depressed compound fracture of the left parietal bone, with radiating fractures therefrom extending into the base of the skull, as well as other separate fractures of the base, resulting from the fall of a "gin," weighing 30lbs, from a height of 34 feet, upon the vertex while the man was in an upright position. The patient died shortly after he was brought to Hospital, death being preceded by a violent convulsion. There was no hæmorrhage from the wound during life, but after death a large pool of blood was found on the floor of the *post mortem* room. A fissure extended from the parietal fracture down through the lesser wing of the sphenoid, dividing the orbital plate, and laying open the optic foramena of both sides. The left lateral sinus was extensively lacerated. Another fracture passed from the foramen magnum over both occipital condyles and through the middle lacerated foramen, until it met at right angles the fracture ending in the optic foramina. The transverse process of the first cervical vertebra was broken off, the head being driven down on the spine, which in fact remained actually impacted into the occipital bone. The posterior clinoid processes were detached, evidently in consequence of the sudden "chuck" communicated to the sella turcica through the tentorium. Prof. Bennett discussed the mechanism of the production of the fractures of the base of the skull in this and in other similar cases; and while not denying the possibility of fracture by *contre-coup* occasionally taking place, he believed that this was an instance of fracture by direct violence in consequence of the base of the skull being forced directly downwards against the spine. (Compare specimen previously described by Prof. Bennett, IRISH HOSPITAL GAZETTE, Vol. II: p. 51.)

Ovarian Cyst.

Mr. H. G. CROLY exhibited a cyst which he had that morning removed from an unmarried woman, æt. 50. The disease was first perceived seven months previously. It affected the left ovary, and presented the usual signs of a tumour of that body. There were slight adhesions at the right side, but it was not necessary to introduce the hand into the abdomen during the operation. The cyst at first sight appeared unilocular, but there was a small second cyst at its lower part.

Pulmonary Hæmorrhagic Infarction.

Dr. YEO showed the thoracic viscera of a labourer, æt. 41, who had been under the care of Dr. Gordon for

aortic patency, with anasarca of the lower extremities. The pulse was slow and feeble, and the heart was believed to be weak and fatty; the area of precordial dulness was *diminished*. A sudden attack of hæmoptysis set in, which continued in a lesser degree for three days, when the patient died; the tip of his nose having become gangrenous just before death. The heart was found to be enormously enlarged and dilated, the aortic valves thickened and irregular at edges. In the dilated right auricle were several small adherent ashy grey-coloured clots, blackish in the centre. The muscular tissue of the heart was slightly fatty. There was a muscular band crossing the left ventricle. The lungs were extremely emphysematous, and a large bladder of emphysema completely covered the enormous heart, and thus masked its diagnosis. In three portions of the lungs were hard, airless masses of hæmorrhagic infarction, the arteries leading to which were firmly plugged with tough adherent clots, which Dr. Yeo attributed to embolism.

SURGICAL SOCIETY OF IRELAND.

Friday, January 22nd, 1875.

JOLLIFFE TUFNELL, Esq.,
President, R.C.S.I., in the Chair.

Supracondyloid Amputation of the Thigh.

PROF. W. STOKES read a paper on this special form of operation, in which he again drew attention to the advantages which he considered might be claimed for it. He laid on the table casts of the stumps resulting therefrom in seven cases which he had himself operated on, and also a cast of a stump from a case of Mr. B. Wills Richardson's, upon which that gentleman had performed the operation with a most successful result. A case which Mr. MacNamara had also operated on with equally good results was likewise alluded to. Prof. Stokes' paper contained the particulars of the two last cases upon which he had performed supracondyloid amputation, according to the rules laid down in his former communication to this Society, and to the Royal Medico-Chirurgical Society of London (May 20th, 1870). In both these cases the operation was undertaken in consequence of necrosis of the upper third of the tibia, with synovial effusion and thickening in the knee-joint, and for extensive necrosis of both bones of the leg respectively. Both patients recovered well, and with good, shapely, and useful stumps, which the members of the Society had an opportunity of inspecting after the Meeting. The author drew attention in chronological order to the various operations in the vicinity of the knee-joint which preceded the supracondyloid amputation; viz., those of Velpeau, Lane, Syme, Carden, Gritti (of Milan), Melchiory, and Prof. Rizzoli, of Bologna. The success of the operation depended upon the site of the femoral section which should be from half to three-quarters of an inch above the articular cartilage. The medullary canal was not thereby opened, and the liability of the split patella tilting upwards obviated. To prevent the latter tendency Prof. Stokes had, in the last cases he operated upon, stitched the surfaces of the two bones together with carbolized catgut sutures, and left the ligature in. The advantages which Prof. Stokes claimed for this operation were twofold: first, those peculiar to the situation at which it was performed; and secondly, those peculiar to the operation itself. In the first category might be enumerated the circumstances that the stump obtained was more useful than that from other amputations of the thigh, and the danger and shock of the operation less; that there was diminished liability to the formation of tubular sequestra; that pressure could be borne on the face of the stump, and that the patient could walk without appearing as if he had ankylosis of the hip-joint. The special advantages were:—1. The posterior surface of the anterior flap being covered by synovial membrane, there was less danger of suppuration and of purulent absorption. 2. The possibility of the patella slipping was prevented. 3. The existence of an osseous covering to the cut surface of the femur. 4. The vessels were divided at right angles. 5. The diminished liability to sloughing of the anterior flap from its being covered with synovial membrane; and also the resulting rounded-cone form of the stump, which had no tendency to become conical. 6. The preservation of the normal attachments and functions of the extensors of the leg. In conclusion, Prof. Stokes remarked that as yet the mortality after this operation in Ireland had been *nil;* and that he had received most favourable opinions as to its advantages from several Surgeons, including Messrs. Wheelhouse and Jessop of Leeds.

Mr. B. F. MACDOWELL spoke of the importance of saving as much of the limb as possible in amputation of the thigh.

Dr. CORLEY said that it had been roughly estimated that every inch of the femur removed represented an increase of 10 per cent. in the mortality. He had recently performed Mr. Carden's operation, and was not pleased with the results, as two ugly projecting pieces of bone were left, and the flap being brought close to the sawn end of the bone, the consequences might be imagined. In Prof. Stokes' operation this pressure on the flap was obviated. Instead of stitching the bones together, as had been done by Prof. Stokes, he would suggest section of the rectus and crurœus muscles so as to prevent the tilting up of the patella.

Prof. MACNAMARA had performed the supracondyloid operation in a very unpromising case with most satisfactory results. The splitting of the patella was accomplished with the greatest ease.

Mr. H. G. CROLY thought that the operation brought forward by Prof. Stokes was more suited for cases of necrosis, or of severe injuries to the bones of the leg, than for cases of diseased knee-joint; the synovial membrane, which was utilized in the supracondyloid amputation, being diseased in cases of "white swelling." As regards the mortality of operations in this situation, he had not lost one of the several cases of Teale's amputation he had performed.

Mr. B. WILLS RICHARDSON remarked that in the third edition of M. Sédillot's work, published in 1865, reference was made to the operation of M. Seymanowski, which was similar to that termed supracondyloid by Prof. Stokes. To prevent tilting forward of the patella in the case in which he (Mr. Richardson) had operated on according to this method, he had divided the tendon of the rectus; a proceeding which did not weaken the power of the stump, and which he preferred to putting a ligature through the small portion of the patella, left after the removal of its articulating surface.

Dr. QUINLAN asked if the patella was diseased in any of Prof. Stokes' cases?

Prof. STOKES, in reply, said he did not wish the supracondyloid to supersede any of the other operations about the knee-joint. He would hesitate to divide the extensors muscle if possible. In his last case there was extensive disease of the soft tissues, but the knee was not diseased in any case. The description given of Seymanowski's operation by M. Sédillot, appeared to him (Prof. Stokes) very vague; and he had been unable to find any clue to Seymanowski's original paper, or any other reference to it.

IRISH HOSPITAL GAZETTE.

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Hospital Reports.

MEATH HOSPITAL.

NOTES FROM THE MEDICAL WARDS.

By ARTHUR WYNNE FOOT, M.D.,
Junior Physician to the Hospital.

CASE OF DISSEMINATED TUBERCULOSIS PRESENTING ITSELF UNDER THE GUISE OF SUBACUTE PERITONITIS.

Under the care of Mr. THOS. L. O'FLAHERTY, Clinical Clerk, and Mr. MARTIN O'CARROLL, Practising Pupil.

A THIN, pallid, and weakly girl, aged 11, was admitted into the Meath Hospital, Wednesday, 13th May, 1874, complaining of a pain in her left knee. Her mother, who was of the poorest class, begged to have her child taken in as she had been trying to nurse her at home for the last four weeks in "rheumatism fever." On examination she was found to be "feverish" (see table) and to suffer from vague and shifting muscular and articular pains; she seldom referred pain twice to the same spot. The day after admission (Thursday 14th) she was given a rhubarb draught, which did not move her bowels. On following day (15th), a *haustus oleosus* was administered without effect. On Saturday, 16th, a hard, tender, fæcal tumour was felt in the right iliac fossa; there was much sensitiveness of the abdomen to pressure, but it was uncertain how much of this was due to the hyperæsthesia which she exhibited; the nurse reported that she was not passing water; on introducing a catheter into the bladder, thirteen oz. of concentrated, acid urine, free from albumen, and of sp. gr. 1032, were removed. Another *haustus oleosus* was given, but no action of the bowels ensued. Her mother stated that her bowels had been moved "as usual" before admission. Sunday, 17th.—She appeared to be in great pain, referred to the abdomen, lay with knees drawn up, moaning, risus sardonicus on the face; she had been awake and in pain all night. As I considered the cæcal fæcal tumour might have something to say to the peritonitis which was now obvious, I thought it right to give an enema. As this proceeding would have otherwise been impossible, owing to the mixture of peevishness, pain, and hyperæsthesia she exhibited, I chloroformed her; but notwithstanding all the patience and care I could use, I was unable to introduce the tube more than four inches inside the anus (see *post mortem* examination), so that the enema was ineffective. The chloroform had the beneficial effect of procuring her a long sound sleep far on into the afternoon, when she was given ℥x tinct. opii. The abdomen was kept diligently poulticed. Monday, 18th.—Constipation continues; gr. x calomel were put on her tongue; 10 oz. of concentrated urine, sp. gr. 1032, drawn off; the tinct. opii repeated. Tuesday, 19th.—She is quieted by the opium and complains less of pain. No tumour now perceptible in abdomen, but great and diffused tenderness of the part; four leeches applied over right iliac fossa; 12½ oz. urine drawn off, free from albumen, sp. gr. 1031. She only takes milk and water. Wednesday, 20th.—Urine running away involuntarily; she gives low cries, and makes efforts to push away the hand when the abdomen is touched; refuses to speak or answer; cold perspiration on face; tracheal râle. She died at 4 P.M., the bowels not having been moved during the eight days she was in Hospital.

She never complained of her chest; there were no pulmonary symptoms, nor did the physical examination discover any specific signs. The annexed is a tabular statement of her temp., pulse, and resp., while under observation:—

1874	TEMPERATURE.		PULSE.		RESP.	
May	M.	E.	M.	E.	M.	E.
13	—	99·6° F.	—	100	—	22
14	98·6° F.	99·4 „	92	96	20	20
15	99·5 „	99·3 „	96	96	26	28
16	100·8 „	100·3 „	131	130	26	28
17	99·4 „	100 „	124	118	28	36
18	99·8 „	101 „	112	108	26	26
19	100·4 „	98·3 „	156	144	23	24
20	100·2 „	—	150	—	57	—

The almost emaciated body, examined four and a-half hours after death, presented well-marked rigor mortis, slight cadaveric lividity, and a notable absence of subcutaneous fat; it retained a perceptible degree of warmth. On opening the thorax, the lungs did not collapse, but met in front, overlapping the remains of the thymus gland, which appeared in the form of two parallel fatty tongues applied against the anterior part of the neck of the pericardium. The right lung was universally, and the left partially—about its upper portion—united to the chest wall by a dense cobweb of dry, fleecy adhesions, easily broken down, and imparting a pasty feel to the fingers. There was no effusion in the pleural cavities. Fleecy bands closely united the interlobar fissures; the pulmonary pleuræ were sown with glistening, vitreous dots, hard, shotty to the

feel, as if the organs had been peppered with snipe shot. The surface of the diaphragmatic pleura, where it was not adherent to the base of the right lung, was spattered with similar crystalline nodules. Connected with the root of the left lung was found an enlarged bronchial gland in a state of cheesy degeneration, converted in the centre into a puriform liquid, which was surrounded with a caseous, very much pigmented deposit. The triangular, inter-bronchial gland was thin and flat, and not much enlarged. The posterior aspects of the lungs were in a condition of sanguineous œdema, giving exit to a bloody froth on section; their anterior aspects were pale grey. The condition of their posterior parts seemed largely due to prolonged dorsal decubitus; they crepitated and floated, and the miliary tubercles, which were numerously scattered throughout their substance, were not more frequent in the dark-coloured than in the paler portions of the organs. There were no remains of former inflammatory products visible in the lungs. The heart presented nothing remarkable; neither peri- epi- or endocardium showed tuberculosis visible to the naked eye.

The peritoneal cavity contained no liquid, nor, with the exception of parts of the ascending and transverse colons, were the intestines distended with gas; on the contrary the small intestines were closely contracted, lying in close folds flattened angularly from mutual pressure; the cæcum contained lumpy fæcal masses in considerable quantity, and scybala were scattered all through the large intestine. The sigmoid flexure of the colon presented several sharp turns, so that it was impossible, even with much more force than could safely be used during life, to make the enema tube in the corpse pass up the bowel for more than four or five inches. Both the parietal and visceral peritoneum were dry, sticky, glazed, devoid of polish or lustre, and communicated a pasty feeling to the hands; there was no exudation-fibrine visible. The surface of the spleen was thickly dotted with whitish and yellowish nodules, varying in size from a pin's head to that of a small pea; part of the convex surface of the spleen was adherent to the diaphragm, the inferior serous aspect of which was in this quarter besprinkled with crystalline and opaque points and dots. The brown-coloured liver, of moderate size, was speckled with yellowish dots, from the size of rape seed to that of small peas, raised from the serous surface, and easily felt as nodular projections; the tubercles were most numerous in the left lobe of the liver. Only one kidney presented any tubercle visible to the naked eye. The brain was not examined.

Clinical Remarks (21st May, 1874) on the above case.

The case, as far as the imperfect history of only a four weeks' illness prior to admission, can be relied on, comes within the category of acute tuberculosis, which may proceed to a fatal termination in from two to six weeks, subsequent to the development of symptoms. The predominance of the symptoms of peritonitis, to which the obstinate constipation was due, co-existing with a fæcal tumour in the cæcum, was sufficiently perplexing with reference to the point as to how far treatment should be directed by purgatives and enemata towards the removal of the fæcal accumulation. The age of the patient suggested an explosion of tuberculosis in the abdominal cavity; in the second decade of life the abdominal cavity seems more liable to manifest the results of tuberculosis than the cranial cavity, which is specially affected in earlier, as the thoracic cavity is in later, life. Her starved, meagre aspect, and crankiness of disposition, probably much due to debility and hyperæsthesia, the result of nutritive asthenia, were clinical features strongly suggestive of tuberculosis, the diagnosis of which condition is far more often to be arrived at by inference and exclusion than by positive symptoms. Tuberculosis in the child—and this puny, imperfectly developed girl of 11 may almost be regarded as a child—is distinguished from tuberculosis in the adult, not so much by the large number of organs in which the deposit takes place at or about the same time, as by the small amount of deposit at one spot, a fact which strikes at the root of physical diagnosis of the condition. Sir W. Jenner describes three varieties of acute tuberculosis in the child—the insidious, the active febrile, and the adynamic—and observes that it is particularly in the latter variety that the unwillingness to be disturbed and irritability of temper is noticed. In miliary tuberculosis in the adult, in whom the deposit is more thickly disseminated through the lungs, the extreme frequency of respiration is remarkable; in this case, in which the lungs, though thickly infected, were by no means "stuffed" with tubercles, the respiration was not much accelerated. It is the spleen and lymphatic glands which in children are most crowded with tubercles, perhaps on account of the active part they take in blood formation. The portion of the diaphragm related to the spleen was in this, as is usual in similar cases, that most thickly studded with tubercles, and supports the view of the propagation of tubercle *per contiguum* from neighbouring organs, actual union having here in parts taken place between the spleen and diaphragm through exudation matter, the result of mutual friction. The presence of tubercle in the liver, as here, indicates great saturation of the system, although in this organ they remain of very subordinate local importance; the markedly yellow colour of some of the larger of them is due to their caseation having been followed by absorption of bile, dead tissues being prone to absorb

pigmentary matters which they reject while living. It is very important to restrict the use of the word tubercle most rigidly to the "grey granulation of Bayle," a definite nodule, very hard, grey, and translucent when first formed, yellower from caseation when older, seldom exceeding a millet-seed in size, but aggregated together in great or countless numbers. These nodules or miliary tubercles are believed by the most modern and competent authorities to be the result of the irritation of the adenoid tissue of the affected part by a virus in the blood, which virus, there is abundant clinical, pathological, and experimental evidence to show, is very frequently derived from the introduction into the circulation of cheesy *débris*. In this instance the focus of infection would appear to have been the cheesily degenerated bronchial gland, liquified in its centre, which was discovered in connexion with the root of the left lung. It appears to be certain that tuberculosis is the expression of a dyscrasia, or morbid state of the liquids of the organism, which often spreads through the body from a single point, but which may perhaps in some cases be congenital.

WHITWORTH HOSPITAL.

CASE OF PECULIAR ERUPTION OF THE HANDS.

By GERALD F. YEO, M.D., Dubl.,
Assistant Physician to the Hospital.

A Compositor, æt. 45, who had always been a remarkably healthy man, applied at the Dispensary attached to the Whitworth Hospital, on Monday, the 7th of last month, with a swelling of his hands, which had come on suddenly two days before, and still prevented him from working, though it was not so bad as it had been on the previous day. The right hand was pale and very œdematous as far as the wrists, where the swelling was sharply defined, the left slightly puffy on the back of the hand and fingers; he said he had no pain or uneasiness in them, and had received no hurt; motion seemed perfect in all the joints, and produced no pain; no other part of his body was at all swollen, and he felt quite as well as usual in every respect except that his bowels were somewhat inactive. His gums had a spongy look and a well marked blue line round their margin. He complained of occasional and transient dimness of vision in both eyes, and had a small ulcer on the left cornea. He was ordered a simple aperient, and bark mixture with five grains of iodide of potassium in each dose.

The bowels were well moved, and the next day the swelling was much less in the right, and quite gone in the left hand. He awoke, however, on the 9th to find them swelling again, and this time they were most intolerably itchy. When he appeared at the Dispensary both hands were much swollen as far only as the wrists. The right was smooth and glistening. About the knuckles and posterior aspect of the cleft of the fingers there were some very minute vesicles situated in a patch of slight redness, and to these parts was referred the intolerable heat and itching.

On the 10*th* these troublesome symptoms had been much relieved by bran poultices and lead lotion; but, the swelling in the hands had rather increased, and the vesicles had extended over the greater part of the back of the hands and fingers, where, on the right, many had run together to form blebs of considerable size. The palmar aspect of the right was also studded, but more sparingly, with small opaque vesicles, which were thickest in the neighbourhood of the metacarpo-phalangeal joints.

On the 11*th* the swelling had slightly diminished, but the vesicles had extended over a greater area; on the palmar aspect of the right hand all those which existed the day before had run into one large irregular, opaque, tense blister, which extended from the centre of the palm to the first joint of the fingers; several smaller vesicles were now seen both on the fingers and the palm, around this centre bleb, which looked like the result of an extensive scald. On the dorsal aspect of both hands and palmar surface of left, the vesicles were very thickly set but not confluent; the surface was pale and free from any sign of inflammation. Where the skin was thin the vesicles were translucent, and gave the surface of both hands a most striking resemblance to boiled tapioca or sago. The itching had now ceased.

On the 12*th* many of the smaller vesicles had dried up; the swelling had notably diminished; the large palmar bleb was not so tensely filled, and there was no pain or uneasiness in any part of the hands.

13*th*.—Swelling nearly quite gone; larger bullæ much shrivelled; many smaller vesicles dried up and brownish in colour.

15*th*.—Desquamation commencing at the edges where the eruption had been slight, and where the skin is now quite dry and brown. Nearly all the vesicles empty.

16*th*.—Palmar blister broken; cuticle which formed it quite dry and shrivelled. The entire skin of the hands desquamating. A peculiar purplish blue line appeared on the nails of each hand, running close to the free margin; this the patient states was never there before. It makes the hands look intensely cold, while their temperature is quite normal.

18*th*.—Process of desquamation continues; the dry fragments of cuticle leave behind a delicate

skin which is not tender, and is quite free from any unusual moisture of the surface.

Remarks.—In entering the name of this disease in the book of registry kept for the purpose, some difficulty was felt in arriving at an adequate nomenclature. It certainly was not eczema, as it left no characteristic oozing surface. Being preceded by no pain, and being bilaterally symmetrical, it could hardly be looked upon as depending on local interference with the circulation, or yet be Herpes Zoster. No form of pemphigus that I have heard of corresponds to this case. I can see no reasonable explanation of the attack if it be not connected with some local poisoning produced by handling the type.

Original Communications.

RARE FORM OF TUMOUR OF THE SCALP.

By GERALD E. BARRON, M.B.,
Hollymount, Co. Mayo.

At the end of November, 1874, Margaret W——, æt. 18, unmarried, daughter of a "small farmer," consulted me. Her medical history was as follows:—About a year before, she noticed a lump about the size of a hazel nut growing on her head, just at the vertex; it was painless and movable under the scalp; she paid no heed to it, attributing it to the custom of carrying pails of water, &c., on her head without an intervening "knot." It remained of the same size for two or three months and then began to enlarge slowly; but she had no medical advice about it till some six weeks prior to my seeing her, when it began to grow more rapidly, and she consulted one or two surgeons in her neighbourhood, who advised her to enter a Hospital, which she declined to do, and then came to me. The tumour at this time was about the size and shape of an ordinary cocoa-nut, situated on the mesian line, its centre a little posterior to the vertex, smooth, elastic, and homogeneous to the touch, immovable, the scalp tensely stretched over it. Firm pressure produced no pain, giddiness, or cerebral symptoms, and there was no pulsation or bruit in it. She complained of shooting pains through the head (not in the tumour), and had a heavy, dull look; though not actually ailing, she had never been very strong and had never menstruated; the mammæ were but slightly developed. She and her friends pressed strongly for surgical interference.

Being anxious to judge of the rate of growth, &c., before deciding on any interference, I directed her to return to me in ten days' time. She did so in about a fortnight, when I found the tumour had decidedly enlarged, and her health seemed failing. I urged her strongly to go to Dublin for Hospital treatment, but she and her friends again declined; so having pointed out the danger of operation, and doubtfulness at the best of permanent benefit from it, I agreed to remove the growth, which I accordingly did on Dec. 18th, 1874. I made a crucial incision through the scalp, extending beyond the tumour, and then dissected off the flaps which were intimately adherent throughout and very vascular. The tumour was everywhere firmly attached to the cranium, and in fact seemed in great measure one with it, bony processes running from the skull into it, and being with great difficulty cut through; in the very centre the bone had been completely destroyed for the size of a crown piece, leaving the cerebral meninges with the brain pulsating underneath, plainly visible. I scraped away as much of the growth as I dared, checked the hæmorrhage which was profuse, replaced the scalp flaps, and dressed with carbolic oil. The operation was well borne, and the patient rallied quickly, and has so far (Jan. 20th, 1875) gone on without any untoward event, the wounds, which only partially healed by first intention, being now nearly skinned over, the general health has much improved, and she suffers little or no headache. The tumour is, however, manifestly growing again, and will doubtless ultimately prove fatal; still I have no doubt her life has been prolonged by the operation, and it may so far be considered successful. Dr. Gerald Yeo has kindly examined pieces taken from different parts of the tumour, and reports as follows:—

"The consistence of the tumour is about that of swollen lymph gland, and appears uniform throughout. On section the surface is even, smooth, and would be quite homogeneous but that it is divided into segments by several fibrous trabeculæ which pass from one surface to the other. They seem to start from the uneven under surface, and become thinner by branching as they approach the cutaneous parts of the tumour. The strongest trabeculæ contain bony spiculæ which are best seen at the side which was attached to the cranium, where they form some considerable bony plates imbedded in the softer structures.

"Under the microscope these hard parts are found to consist of true bone tissue, the stellate bone cells, whose numerous processes freely communicate, being arranged regularly with their long axes corresponding to that of the fibrous bands. Immediately around this bony tissue are layers of cells arranged in much the same way, most of which however seem to have a distinctly spindle-form, and at the outer edge of the trabeculæ they are imbedded in a quantity of ordinary fibrillar tissue, resembling a normal tendon. From the edges of these fibrous partitions arise a series of extremely delicate fibres, which are lost in the adjoining softer part of the tumour, and in preparations from which the cells have been shaken

out, they are found to be continuous with a beautiful delicate homogenous network of fibres which pass between the thickly set cells and seem to form a kind of inter-cellular support, very like that found in adenoid tissue.

"The tissue between the fibrous trabeculæ is quite even throughout and forms the great bulk of the tumour. Under the microscope it appears as a mass of small granular round cells tightly impacted in a fine meshwork of inter-cellular substance, which in some places seems distinctly fibrillar and tolerably thick, in others thin, homogeneous and sharply defined, while in rarer instances it is granular, uneven in thickness and margin, and looks more like a soft protoplasmic bed, in which lie scattered a smaller number of the same small round cells. In some preparations the small round cells seem imbedded in the fibrous tissue, there being every stage in the transition from them to the spindle-formed cells already described.

"The great part of the tumour has the structure of a small-celled sarcoma, but many parts of it are so strikingly like a lymphatic gland, both in the structure and arrangement of its elements, that they deserve the name lympho-sarcoma.

"The osseous parts most likely owe their character to the tendency of the ground which formed its origin, namely the periosteum.

"The relative amount and variable arrangement of the bony, fibrous and cellular elements in the different parts of the tumour, make it a most interesting histological specimen, showing as it does so many gradations from one kind of connective tissue to another."

Original Lectures.

CLINICAL LECTURE ON PARACENTESIS ABDOMINIS, IN CASES OF CIRRHOSIS OF THE LIVER.

By THOMAS HAYDEN, F.C.P.,
Physician to the Mater Misericordiæ Hospital.
From Notes taken by Mr. DAVIS, Resident Clinical Clerk.

GENTLEMEN—Two cases of cirrhosis of the liver, in which tapping has been repeatedly performed with satisfactory results, have been recently under your notice. These cases may be profitably contrasted, not only in regard to the symptoms exhibited, but also with reference to the effect of paracentesis upon the progress of the disease.

The first case I shall direct your attention to, is that of Michael B——, a discharged soldier, of intemperate habits, who was admitted under my care on the 8th of last October. He had been subject to epistaxis, had hæmatemesis, and bleeding from the bowels. At the date of admittance he was much wasted, the abdomen was distended with liquid, and the superficial abdominal and inferior thoracic veins were enlarged and turgid. The skin and conjunctivæ were slightly jaundiced; the bowels were constipated, and the urine was defective in quantity, of low specific gravity, and contained albumen. He suffered much from dyspnœa, owing to the pressure of the abdominal fluid upon the diaphragm; when he assumed the recumbent posture, his face and neck immediately became congested, and he was forced to sit up. The pulse was small and quick, and the heart was displaced upwards, its apex pulsating at the level of the nipple, but in the normal vertical line. From this latter circumstance I was led to diagnose old adhesions of the pericardium at the base.

On the 16*th*, twenty pints of serum, of sp. gr. 1·009, and containing a large quantity of albumen, were taken from the abdomen by means of a large trocar and cannula. The patient, who was constitutionally nervous, exhibited great alarm at the prospect of the operation; nevertheless he bore it well, and experienced great relief from it.

The object which I hoped to attain by tapping was twofold; namely, to relieve embarrassment of breathing, and to induce a more copious secretion of urine, by removing liquid pressure from the diaphragm and the renal veins.

The former of these objects was completely accomplished, and the latter partially; the man was enabled to breathe, even in the recumbent posture, with ease, and, for a week after the operation, there was a notable increase in the secretion of urine.

The relief, however, was only temporary. The operation was repeated on the 6th of November, when sixteen pints of liquid, highly albuminous, of acid reaction, and 1·009 sp. gr., were removed. On this occasion there was complete suppression of urine for forty-eight hours after the operation. A diuretic was now administered, consisting of spirit of juniper, ℥ii; spirit of nitrous ether, ℥i; nitrate of potass, ℈i; and water, to ℥viii. An ounce to be taken every third hour. The kidneys again acted; but on the 14th, owing to a partial suppression of urine, it was deemed necessary to prescribe gr. v. of blue pill twice daily. This had the desired effect, but on the 21st, it was found necessary to suspend the use of mercury, slight salivation having appeared. The urine secreted during the previous twenty-four hours amounted to two pints.

On the 27*th*, there was again a large accumulation of liquid in the peritoneum; the feet were now œdematous, and purpuric mottling appeared over the surface. On the 29th, there was copious epistaxis.

Paracentesis was performed for the third time on the 6th of December. Twenty-four pints of pale fluid, of acid reaction, sp. gr. 1·011, and highly albuminous, were removed. There was

again on the 9th, a large accumulation of liquid in the abdomen, and the secretion of urine was in defect. The man now rapidly sank, and on the 20th he died.

Thus, fifty pints of fluid were removed by tapping, within a period of seventy-three days; the interval between the first and second operations having been twenty-one, and that between the second and third, thirty days.

On examination of the body, the liver was found to be reduced in volume, nodular on the surface, and pale in colour; the fibrous tissue was in excess, and the hepatic cells exhibited a large proportion of oil. The peritoneum was distended with serum, and the intestines were, in several places, firmly agglutinated by old adhesions. The kidneys were likewise reduced in volume, and cirrhosed. The spleen was enlarged and adherent to the diaphragm, and its capsule was thick and opaque.

The case presents a typical example of cirrhosis of the liver and kidneys; and further, it shows, not only the relief from urgent symptoms which paracentesis is capable of affording, but also the safety of the operation, even though repeatedly performed.

The next case is exceptional in many respects; there is no history of intemperance, there has not been hæmatemesis or melæna; enlargement of the spleen cannot be detected; and lastly, the patient's health improved, and there had been no return of ascites for a period of eight weeks after the first effectual tapping.

The history of the case is shortly as follows. The patient, Catherine M——, a poor, industrious woman, unmarried, aged about 50 years, was admitted into Hospital under my care on the 12th of September last. Her health had been good up to six weeks previous to that date; she then complained of a feeling of uneasiness—rather than of pain—in the abdomen, constipation, loss of appetite, and progressive debility.

When admitted she was sallow and emaciated; the feet were slightly swollen; there was ascites, and the superficial veins of the abdomen were enlarged. In the recumbent posture respiration was much embarrassed, owing to the extreme distension of the abdomen; the veins of the neck, forehead and temples being remarkably turgid. The operation of paracentesis having been decided upon, the pneumatic aspirator was used on the 15th, and again on the 16th of September. By means of this instrument about seven pints and a-half of liquid were removed on each of these occasions, with comparatively little pain or disturbance to the patient. The process was, however, too tedious and exhausting to the sufferer; and therefore, on the 19th, the trocar and cannula were used, and eighteen pints of liquid were removed. After the operation I made a careful examination of the abdomen by palpation, and failed to detect enlargement of any of the viscera. The patient now rapidly improved; under treatment with mild tonics and diuretics she gained flesh, and the œdema of the feet disappeared; there was no return of the ascites, and she was discharged on the 11th of November in comparatively good health.

She was again admitted on the 8th of January, 1875, all her former symptoms having reappeared. A few days subsequently eighteen pints of liquid were removed by paracentesis, on the 8th of February seventeen pints more were taken, and on the 23rd, twelve pints, the fluid on both the latter occasions being slightly tinged with blood. Thus, the total quantity of serum removed by paracentesis amounted to eighty pints, or ten gallons.

Notwithstanding the ultimate issue to be looked forward to, and within a period not very remote from the present, this case is worthy of being recorded as showing, not only the safety of paracentesis, but also the temporary benefit by relief from urgent symptoms, and postponement of the fatal issue, which it is capable of affording.

I do not, on the present occasion, propose discussing the pathology of "cirrhosis," save, only, in so far as I feel bound to express a definite opinion on the subject. Cirrhosis, then, in my judgment, consists in cell-proliferation, thickening, and contraction of interstitial fibrous tissue, resulting from persistent irritation, or sub-acute inflammation, to whatever cause due. The symptoms which follow are all, directly or indirectly, results of the mechanical impediment arising from this change. This, as you know, is the generally received doctrine on the subject. In the lungs and in the heart it is most frequently due to antecedent inflammation of the pleura, or of the valvular endocardium, propagated by continuity to the subjacent interstitial structures. In the liver and kidneys, irritation rather than inflammation would seem to be the exciting cause, and alcohol, freely and persistently used, the agent by which this is most frequently produced. In the first case given, there was a clear history of the abuse of alcohol, but in the second case no such history can be obtained; nay, it is even positively excluded by the attendant circumstances. I will not venture to speculate as to the cause of the affection in the latter case; but that causes of cirrhosis of the liver and kidneys, other than alcoholism, do exist, although exceptionally, cannot be doubted.

You have witnessed the treatment pursued in both these cases; it was regulated by the indication to promote nutrition and secretion upon the one hand, whilst withholding liquids and stimulating aliment upon the other.

The removal of extrinsic pressure from the cava and the emulgent veins by paracentesis, and,

in a less degree, by the expulsion of scybala from the colon, I have frequently found to promote, in a marked degree, the action of diuretics. Free purgation may further assist these agents, by reducing the actual volume of the blood. I regard mercury as the *best* diuretic we possess in cases of renal congestion, but where chronic renal disease exists, it must be given with the utmost caution. I have known two grains of calomel to cause profuse salivation, with ulcerative stomatitis, in a case of cirrhosis of the kidneys. In the first case which I have narrated to you, blue pill was given in minute quantity, and with much benefit in regard to the action of the kidneys, but it was immediately stopped on the appearance of the first symptoms of mercurialism.

The operation of tapping, though formidable to the patient, and for this reason to be resorted to only in the last event, need not be avoided from apprehension of consecutive peritonitis. The peritoneum, accustomed to the contact of liquid, as in ascites, will bear with impunity operative procedures, which, in the healthy state, it would promptly resent by inflammatory reaction.

The effect is sometimes even apparently, though, of course, not permanently curative. In the case of an aged clergyman suffering from cirrhosis of the liver and ascites, who, some years ago, was sent to Dublin for my advice by Dr. Hartigan, of Croom, paracentesis was repeatedly performed. When I last heard of him, six months after the last tapping, there had been no return of the ascites, he was active, capable of officiating, and in the opinion of his friends, cured of his disease. The medicine prescribed was bromide of potassium, with acetate of potash. So favourable a result is strictly exceptional. In the case of Catherine M——, you have had an exemplification of the temporary *arrest* of the disease by paracentesis, or rather, of the suspension of its principal and most urgent symptom, ascites.

Progress of the Medical Sciences.

REPORT IN OBSTETRICS AND DISEASES OF WOMEN.

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On the Application of the Forceps before the Full Dilatation of the Os.

In the Report of the Rotunda Hospital for the year ending Nov. 5th, 1874, read before the Obstetrical Society on Jan. 5th, 1875, by the present Master, Dr. Johnston, the special attention of the members of the Society was directed to the fact, that during the year the forceps had been applied in forty-two cases, thirty-four of which were primiparæ, before the full dilatation of the os.

In all the cases but one in which this treatment was found necessary, the women were primiparæ in whom the membranes ruptured early, and there was therefore no bag of waters to dilate the os. In a number of these cases, the head was above the brim, and the os only two-fifths (1⅘ inches nearly) dilated when the forceps were applied. In no case did the attempt to deliver fail. If the os was rigid, the usual means were employed to relax it before the forceps were applied. Dr. Johnston considers that though it should not be undertaken except by men of considerable experience, still, in skilled hands it is a perfectly safe operation.

Of the forty-two cases thus operated on, two died; one of pyæmia and one of peritonitis.

Considering the importance of this subject, it may be well to see what views are held with regard to it by the most recent writers on obstetrics. Leishman, in his Midwifery, published in 1873, after giving the circumstances which usually contra-indicate the use of the forceps, says (page 522) that in some cases "To wait until the lip of the os can no longer be felt, as some have said, is to wait for what may possibly never occur; and, in like manner, if we accept the rule as perfectly correct, that we are never to pass the blades of the forceps within the uterus, we may allow the period to pass, at which we may, by prompt action, save the life of the child. . . . . In many cases, then, we are justified in passing the blades partly within the uterus, and we apprehend that Dr. Ramsbotham's assertion is strictly correct when he affirms, that the forceps may be used in some cases in which as much as a third part of the circular margin of the os uteri can be felt."

Scanzoni, in the third Vol. of the fourth edition of his *Midwifery*, published in 1867, writes as follows (p. 152):—"Although it is undoubtedly better when there is no danger in delay to wait till the soft parts are fully, or very nearly fully, dilated, still we will often be compelled to apply the forceps before the os is dilated to this extent. The question then arises, 'what is the smallest amount of dilatation through which we can hope, with a reasonable expectation of inflicting no injury to the woman, to extract with the forceps?' Of modern writers Wiegand probably gives the best advice, when he lays it down as a rule that you should wait till the os is dilated, or has been artificially expanded, to the extent of at least two inches. Only in most urgent cases should we attempt to apply the forceps when the os is only the size of half-a-crown, having first satisfied ourselves that the edges were soft, thin, and dilutable, and that there can therefore be no possibility of encountering any great hindrance from spastic contraction.

"When, for the sake of the woman, it is necessary to empty the uterus at once, and where this can only be accomplished by applying the forceps, in such a case, if the os is so small as to render this impossible, we must have recourse to its forcible (blutige) dilatation."

Schröder, who is one of the latest German authorities on obstetrics, among the rules for the application of the forceps in ordinary cases, gives the following (fourth Ed., p. 251):—"The soft parts must be fully prepared, or in other words, the cervix must be completely taken up, and the os so large that the fœtal head can be drawn through it without difficulty." This he lays down as the general rule, but further on he makes some important exceptions to it. "However, cases often occur in which all these conditions are not fulfilled, and in which nevertheless it seems most desirable to terminate the labour by the application of the forceps. Under such circumstances their use is not absolutely contra-indicated, but the operator must always bear in mind that he is undertaking the operation under difficult and exceptional conditions, and that his responsibility is increased in like proportion.

"Thus with regard to the above rule, one is justified in applying the forceps as soon as the blades will pass through the os, if the indication for the operation are

very urgent. If the edges are dilatable the traction will cause it to dilate fully. If it does not, or if, while the os is too small to apply the forceps the indications for immediate delivery are urgent, we must first procure the necessary amount of dilatation by artificial means."

On the Treatment of Superficial Rupture of the Perineum.

Dr. MANN, in a paper on this subject in the *American Journal of Obstetrics*, Nov., 1874, divides ruptures of the perineum into three classes, viz., the superficial, the central, and the deep. He only treats of the first of these classes, under which are included all ruptures extending through the fourchette which do not involve the sphincter ani. From the statistics given by the author, it is evident that this injury is of much more frequent occurrence than is generally supposed. Schröder says it occurs in nine per cent. of multiparæ, and 34·5 per cent of primiparæ. Olshausen thinks that a considerable rupture is unavoidable in 15 per cent. of first cases. In the Hospital at Halle, where the most approved means are taken to prevent it, it has occurred during the last ten years in 21 per cent. of first cases, and in 4·7 per cent. of multiparæ. In one Hospital he saw it occur in 47 per cent. of first cases.

The reasons why it has been so little noticed are obvious. First, it is seldom looked for; secondly, if noticed, the practitioner in attendance generally prefers, unless it is very bad, to say nothing about it, and trust to nature, rather than make the woman undergo a very painful operation, the necessity for which might easily be attributed to his carelessness or want of skill.

That these wounds, though not clean cut, heal readily by first intention, provided only that the torn surfaces are kept in apposition, is shown by the number of cases that unite under the simple treatment of applying the ordinary obstetric bandage somewhat lower than usual, and tying the woman's knees together; as also by the fact, that central rupture of the perineum is seldom followed by fistula. This plan is, however, very uncertain, as the torn edges may easily become separated by the movements of the patient. The operation by sutures of course obviates this danger, but besides the pain inflicted on the patient, it has too much the appearance of a formidable operation. The author therefore strongly recommends the method adopted in the Lying-in Hospital in Vienna, by which excellent results are obtained. The plan consists in bringing the edges of the wound together by three or four *serre-fines*, until union has taken place. The advantages of this method are, that it is readily applied, gives little or no pain, does not alarm the patient, and does not prevent her moving in bed.

The mode of application is as follows:—The woman being in the ordinary obstetric position with the thighs well flexed on the abdomen, the surfaces are prepared by checking all hæmorrhage and removing all clots. The serre-fines are then made to grasp both edges of the wound to the depth of about half an inch. Three or four will generally be sufficient. The instruments, the points of which should not be too sharp, should be strong enough to hold themselves in their place, but not so strong as to cause pain by pricking, or to lead to ulceration. The best time to apply them is about an hour after delivery, and they should be allowed to remain *in situ* for forty-eight hours. In Vienna union is expected in every case so treated.

Though such a result leaves but little to wish for, the author recommends us to combine this treatment with the ordinary one of tying the woman's knees together, and keeping the bowels quiet by opium till the third day. The use of the catheter, though not absolutely necessary to success, is also recommended.

In conclusion the author gives the results of ten cases treated by this method. Out of this number perfect union took place in five cases. In three the serre-fines were not applied till after the lapse of nine, ten, and twelve hours, and in two of these there was partial union. In one case where the union was perfect the serre-fines were not applied till three hours after delivery. The result in one case is not given.

On some Disputed Points in the Delivery of Cases of Breech Presentation, and the Extraction of the Head in Cases of Turning.

In the *Archiv f. Gynækol.*, Vol. VII., Part I., will be found a paper with the above title, written by Dr. Ernst Korman, of Breslau. In it his chief object is to refute the statement of Schröder, that, if well-directed manual efforts are unable to effect the extraction of the head in such cases, you will never be able by means of the forceps to deliver a living child. In support of his views the author gives thirty-five such cases which he has delivered, in thirty-one of which manual extraction succeeded, and in four of which he had to apply the forceps, having failed to deliver by the ordinary methods. Of these four cases, two lived and two were born dead.

According to his experience, the indications for applying the forceps to the head in breech and turning cases, are:—1. In cases of rigidity or contraction of the cervix which grasps the neck of the child firmly after the arms have been brought down, and which can only be overcome by such an amount of force as would render a rupture through the cervix very likely to occur. 2. Where the chin is hitched over the pubis and cannot be made to rotate backwards, provided that the occiput has entered the pelvis. In extracting in such a case we should endeavour to make the occiput rotate round the pubis as a centre, the chin remaining above it and being born last. In this way the danger of ruptured perineum is lessened. 3. When there is slight disproportion, the fœtal head being compressible. Such disproportion may occur in quite normal pelves from extravasation of blood within the fœtal cranium, from over development, or from hydrocephalus.

The other conclusions to which the author comes refer to the treatment of difficult breech-cases, for conducting which he lays down the following rules:—1. In cases where the breech is delayed at the brim, extraction should always be effected by bringing down the foot that is in front. The blunt hook should never be used unless we are certain that the child is dead. On this point he agrees with both Schröder and Hüter. 2. When the breech is well down in the pelvis we should still try to pass up the hand and bring down the foot that is anterior. If we fail in this, or if the breech be already at the outlet, we should try Kristeller's plan, or the expression method. This can, however, not be carried out in cases where the uterus is very sensitive to pressure, or where there is prolapse of the vagina. In such cases then, we should endeavour to extract by means of the forefinger inserted into the bend of the thigh, and if this fail, a loop should be passed over the thigh, which is not a difficult thing to do, and delivery accomplished by making traction on the loop. If the child is known to be dead we should use the blunt hook. In no case is it good practice to apply the forceps to the breech. Schröder thinks that if the indications to delivery are urgent the child must run the risk incurred by the use of the hook. He disapproves of the application of the ordinary forceps to the breech, and thinks the breech-forceps are constructed on wrong principles. Hüter on the other hand approves of the application of the forceps to the breech when it is low down, and cannot be extracted by manual interference. He directs that the blades should be applied over the cristæ ilii, that the handles should be firmly pressed together in order to prevent them slipping, and that the blades be removed as soon as

the trochanters are born. If you are unable to effect the extraction with the forceps you must have recourse to the cephalotribe. Unfortunately Hüter does not tell us in how many cases he has succeeded in thus effecting delivery, but expresses himself generally thus: —"If the forceps be carefully applied there is not the least danger of injury either to mother or child." Dr. Korman thinks that this operation is, at all events, unnecessary, and also that Hüter has under-estimated the danger of injury to the child. 3. The extraction of the head is best accomplished when the child is alive, by the plan adopted by Veit (Smellie's method), or that known as the method of Prag. Should the head be very high up and the pelvis contracted, we should, before we try to extract by either of these methods, press the shoulder that is anterior forcibly against the perineum, taking care that in so doing you do not fracture the clavicle. Firm pressure on the head through the abdominal walls is of the greatest assistance to the operator. In the cases already given, we should apply the forceps. If the pelvis be greatly contracted, then we should perforate and apply the cranioclast, and this at once if the child is known to be dead. Schröder perforates at once if he fails in the manual extraction. Hüter has his own method of manual extraction. In case of contracted pelvis he recommends us to grasp one leg of the child in each hand and make firm traction perpendicularly downwards (the woman is supposed to be lying on her back across the bed, with her hips well over the edge), and when the head has thus been forced to enter the pelvis, to insert two fingers of one hand into the mouth, and grasping both feet with the other hand, make traction, at the same time turning the child's body upwards towards the abdomen of the mother. Should this fail he applies the forceps, and if after two or three pulls the head does not come down, he perforates. I agree with him about perforating if the forceps should fail, but think that he will require to apply them much oftener while he uses his own method of manual extraction, than if he were to adopt that recommended by Veit.

On a new method of Treating Spastic Contraction of the Uterus during the Second and Third Stages of Labour.

Dr. E. Fränkel (*Archiv f. Gynækol.*, Vol. VII. p. 375), says that violent or tetanic contraction of the uterus requiring treatment is met with under the following conditions. 1. In some cases of contracted pelvis, where the membranes have ruptured early, and the uterus has been unable to expel its contents. If in such a case the face or brow present, as it often does, the treatment would be to turn at once, but that the violent contraction of the uterus makes it probable that if any attempt were made to pass in the hand to turn, it would immediately lead to rupture of that organ. 2. It is also met with in neglected cases of arm presentation, in which case disarticulation of the arm has usually been the treatment. Indeed, even now-a-days, well informed practitioners use the perforator in cases of contracted pelvis where, from spastic contraction of the uterus the effort to turn has failed. 3. Such violent contraction of the uterus is also met with during the third stage, and is due, according to Fränkel, to premature attempts to remove the placenta, whether by violent pressure or pulling on the cord. It may also occur where there is partial adhesion, the detached portion of the placenta filling the os and irritating it to contract, while its expulsion is prevented by the adhesion. 4. Finally, we sometimes meet it in breech cases, where the os closes on the neck of the child, and frustrates all our efforts to extract the head.

The means that have been in use up to the present time for treating this state of the uterus, are, the use of opium by the mouth and rectum, of morphia, which is now usually given hypodermically, and chloroform. There are serious practical objections to all these methods. Both opium and morphia take some time to produce their effect. Chloroform has but little power in overcoming the spastic contraction, and hardly appreciably lessens the reflex irritability. It is true that chloroform shortens the pains and lengthens the intervals, but its chief action is in quieting the abdominal muscles, and preventing the patient bearing down. In cases, therefore, where from any cause such as hæmorrhage, immediate action is called for, no course is left but to overcome the spasm by gradual manual dilatation. This method is open to many objections, the first of which is that it is very tiring and incapacitates the hand for further operative interference. Next, it is a powerful stimulant to increase uterine action. And lastly, it frequently causes injury to the soft parts, which is followed by para- and peri-metritis.

What we want, therefore, to obtain is some combination which will produce the greatest amount of relaxation of the uterine fibres with least fear of subsequent hæmorrhage, and that acts so quickly as not to endanger either the mother's life or that of the child, by delay. Fränkel for some time thought that he had found out such a remedy in the combined use of the subcutaneous injection of morphia, followed by the administration of chloroform. He found, however, that there was sometimes dangerous delay even with this plan, and also that it was difficult to carry out when operating single-handed, as the administration of the chloroform required most careful watching, from the liability there is to dangerous asphyxia. He was led by the experiments of Breslau on the effect of the subcutaneous injection of atropine on uterine contraction, to turn his attention to this drug. This method got into disrepute through a case published by Spiegelberg, in which the subcutaneous injection of $\frac{1}{10}$th of a grain of atropine was followed by dangerous atony of the uterus. Fränkel, therefore, determined to try the effect of a much smaller dose of atropine, and to see if its action could not be increased by combining it with morphia. Having employed this combination in many cases, he has come to the following conclusions:—1. In cases of spastic constriction of the uterus, either in the second or third stage of labour, whether the whole or only part of the uterus is involved, the use of the combined subcutaneous injection of atropine and morphia, followed by the administration of chloroform, is the surest, safest, and quickest method for overcoming such spasm, and rendering operative interference possible. 2. If the proper dose, more especially of atropine (*i.e.*, not exceeding 0·001 gramme) is used, and the third stage skilfully conducted, the danger of subsequent atony, and consequent dangerous post partum hæmorrhage, is not increased. 3. The use of the morphia and atropine makes the subsequent administration of chloroform both safer and easier.

Torsion of the Pedicle of the Ovary (*De la Torsion du Pedicule des Ovaires.* Koeberlé.)

Koeberlé agrees with Rokitansky that some of the pediculated pelvic viscera are liable from the various movements of the body, such as lying on the side, &c., to become rotated on their axis, and even undergo a veritable torsion. In the case of the ovary this torsion may take place slowly, in which case it will give rise to but few symptoms: or suddenly, in which case it will cause symptoms that will make the diagnosis possible, such as pain, and the rapid formation of a cystic tumour. This accident happens most readily during menstruation. Immediately after some sudden twist or turn, the patient experiences a sudden and prolonged pain in one hypogastric region, accompanied by numbness of the corresponding thigh and pain in the region of the kidneys, sometimes also by vomiting. This pain is exacerbated at intervals, and may become so intense as even to call for the operation of ovariotomy, though

the tumour itself is very small. As a consequence of this torsion the return of fluids through the veins and lymphatics is retarded; these vessels become dilated, and a cyst is formed. This cyst is usually unilocular, and contains a brownish fluid mixed with blood, or, in some cases, coagulable lymph.

Koeberlé has seen some cases in which the ovary was entirely detached. It had, however, contracted vascular adhesions with the surrounding viscera, from which it drew its nutritive supply. He has also seen cases of torsion of the pedicle of a fibrous tumour in which the lesion was diagnosed.

Schutzenberg has seen a uterus, which contained a large fibrous tumour, thus twisted. The woman was suddenly attacked by violent pain after turning herself in bed, lypothymia, with a small pulse. On her death, which followed soon afterwards, it was found that the uterus and the vagina had turned once completely round. There was great congestion at the fundus, with subperitoneal exudation of blood.(1)

Reviews.

Mind and Body. The Theories of their Relation. By Alexander Bain, LL.D. London: Henry S. King and Co. 1874. Third Edition.

Professor Bain has embodied his views as to the relations between our mental and physical nature in the above-named short treatise, which forms the fourth volume of the "International Scientific Series." The general argument for the close inter-dependence of mind and body, having its basis in the ascertained facts of physiology, is dryly but clearly set forth; the conclusion of the writer being that mind and body are not two separate entities, but merely two aspects of one entity. "The one substance, with two sets of properties, two sides, the physical and the mental—*a double-faced unity*—would appear to comply with all the exigencies of the case." He does not touch upon the important question of the immortality of the soul, but it is evident that the drift of his argument from physiology tells against this. If mind be necessarily inherent in body, and liable to be affected by all its changes, the inference is that mind is a property of body, and that when body ceases to exist, mind must likewise cease to exist. Professor Bain is, however, cautious about thus declaring in terms, that body is the *substratum* of mind; and he even hints that the argument from physiology is incomplete, and that the question has its transcendental side, which also requires discussion. Even as a physiological study, this work (as the author is quite willing to confess) is incomplete, dealing as it does almost exclusively with the influence of what we call body upon what we call mind, and giving but a cursory glance at the converse aspect of the case. Dr. Daniel H. Tuke's work on the Therapeutic Influence of the Imagination may be here mentioned as bearing upon this part of the subject.

Many of the views which Mr. Bain incidentally propounds are most interesting and suggestive, as, for instance, his theory as to the formation of the will by the action of the intelligence upon the surplus vital energy, which tends to run to waste in vague impulses. This would justify the opinion of many of our alienists, that in every case of impulsive insanity there exists a lesion of intelligence—not necessarily a lesion of the reasoning power, but rather of the inhibitory power of reason.

It is his opinion that each man's intellect is strictly limited by the capacity of his brain, for the retention of ideas, there being for every brain, what we may call a co-efficient of saturation, so that a period must arrive when the acquisition of new ideas must be obtained at the expense of the displacement of old ones. He further suggests that the association of ideas may have its physical basis in the formation of connections between the various nerve fibres, which transmit our thought—a complex idea necessitating the linking together of the various nerve centres, which are concerned in the genesis of the simpler ideas which enter into its formation. If all this be true, it behoves us to be careful as to the nature of the tissue we weave out of the raw material of our brains—a knot on a nerve-fibre may not be so easily undone as a knot on a pocket-handkerchief.

(1) *Rev. des Sciences Méd.* Jan. 1875.

The Irish Medical Directory for the Year 1875. Dublin: Offices of the "Medical Press and Circular." London: Bailliere, Tindall and Cox: pp. 504.

As might be expected from the energy and experience of the Editor of this Directory, its usefulness increases each year. To the Dispensary Medical Officers especially, we can now imagine it as being almost a *sine qua non*, as this year's issue contains a digest of the Sanitary Laws in force in Ireland, prepared by Mr. Wodsworth, Assistant Secretary of the Local Government Board, as well as much other conveniently arranged information as to the recent Public Health (Ireland) Act, relating to them in their newly constituted capacities as Sanitary Authorities. Another useful addition is a table of the principal Natural Mineral Waters of Great Britain and the Continent, with their composition and therapeutic uses. We are glad to observe that much fewer names appear in this year's Directory with the mark attached showing that the persons thereby indicated have not replied to the circulars sent them, requesting information as to their qualifications, appointments, etc. When so much trouble is taken in the preparation of a work of this kind, which is intended to be an authentic reference for the Profession and Public at large, the non-compliance with such a simple request, while discourteous to the Editor, may possibly prove disadvantageous to those who withhold the information requested; but cannot injure a publication which has already established itself as an authoritative work. We can only regret that it does not make its appearance in at least the first month of the year.

Extracts from Journals.

The Etiology of Diabetes Mellitus.—A recent number (Dec. 5th) of the *Medical Times and Gazette* contains a notice of an article in the *Berliner Klin. Wochen.*, of Nov. 2, by Dr. Schmitz, of Neuenahr, in which that gentleman points out that hereditary predisposition has probably more to do with the development of diabetes than almost anything else. Mental anxiety, severe pain, and injuries of various kinds, whether they affect the nervous system or not, seem to be powerless to set up the disease without this inherited tendency. Of 104 patients observed and treated by the author since 1868, and in whom the family history was most carefully inquired into, twenty-two were found to have had diabetic parents or relations; and if those cases had been included in the list in which the patients "believed" that other members of the family had been similarly affected, but were not absolutely certain of the fact, the number would have been much higher. Dr. Schmitz, however, only looks upon hereditariness as a predisposing cause, and he brings forward several interesting cases to show how the tendency may remain latent for years, until some sudden mental injury or bodily trouble calls it, as it were, into life.

THE TRACTILE METHOD OF THE REDUCTION OF STRANGULATED HERNIA.—We lately gave in the IRISH HOSPITAL GAZETTE (Vol. II. pp. 208 and 272) an account of this method which had proved successful in several instances. At a recent meeting of the *Société de Chirurgie* of Paris (*La France Médicale*, Nov. 14) the President, M. Perrin, communicated the particulars of a case of strangulated inguino-scrotal hernia which had been reduced by this method. Taxis, under chloroform, had been tried without success by M. Gosselin, and that distinguished surgeon was about to operate, when M. Perrin, who had read the description of this method of reduction, proposed that it should be tried. Accordingly, forty-six hours after the strangulation had occurred, an Hospital attendant took the patient up by his legs, and placing them over his (the attendant's) shoulders, raised him up so that the patient's head and shoulders rested upon the bed. In this position M. Perrin practised the taxis, and the hernia was soon reduced to half its former size. The patient was replaced upon his bed, and the reduction was completed in the horizontal position.

UPPER CLASS VITAL STATISTICS.—The *British Medical Journal* in an article on Mr. Ansell's paper on this subject, thus compares the "Upper Class" mortality with the national mortality as set forth in the English Life-Tables. "In extreme infancy, that is in the first year of age, of 100,000 children born, 8,045 die, according to the Upper Class; and 14,949 according to the English Life-Table. In the next period of childhood, from one to five years of age, of the survivors of the same 100,000 children born, 4,684 die among the upper classes, and so many as 11,369 in the general population. During the remainder of childhood, the difference is not so marked; between 5 and 20 years, the deaths by the Upper Class Table are 6,547, against 7,407. Among upper class adults, 12,552 die between 30 and 40 years of age; and 14,774 between 40 and 60 years; the corresponding numbers at these groups of ages, according to the the English Life-Table, are 12,417 and 16,876, respectively. In the later groups of ages, the number of deaths, according to the two tables, do not, however, fairly represent the mortality, because the 100,000 children with which we started in each class, the proportional number of survivors, exposed to risk at those ages, among the upper class so far exceeds that among the general population. The annual rate of mortality per 1,000 among infants under one year of age, appears to be but 80 among the upper classes, against 166 according to the National English Life-Table; among children, aged between 1 and 5 years, the difference is still more remarkable, the rates being 13 and 37 per 1,000, respectively. Between 5 and 20 years of age, the rates of mortality are 5 and 7 per 1,000; 8 and 10 per 1,000 between 20 and 40, and 12 and 18, respectively, between 40 and 60 years."

TRANSFUSION OF ANIMALS' BLOOD.—Professor L. Landois, of Greifswald, makes a preliminary communication of the results of experiments made to show the causes of the febrile symptoms which follow the transfusion of blood of animals of unlike species. He states that the corpuscles of such blood generally collect in masses, and are always dissolved shortly after its introduction, and that this change tends to produce coagulation of the blood of the infused animal. He was able to observe the steps in the production of inflammatory changes in the tissues of a frog, and found that they were due to embolism and thrombosis which depended on these changes. Having given a detailed account of the chief changes which occur in the principal organs, he concludes that owing to the dissolution of the corpuscles of the strange blood which is certain to take place, they cannot possibly exercise renewed function in the higher animal, and he therefore believes it is useless to hope for any real benefit from the introduction of animals' blood into the circulation of patients suffering from phthisis, &c.—*Centralbl.* No. 1, 1875.

G. F. Y.

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, February 13th, 1875.

ROBERT MCDONNELL, M D., F.R.S.,
President, in the Chair.

Intestinal Strangulation.

DR. BANKS presented a specimen from the body of a child, aged 1 year. There had been no motion from the bowels for eight days preceding admission into Hospital. A considerable portion of the small intestine was gangrenous; the strangulation having been formed by a slit in the omentum, into which the gut had slipped.

Cardiac Hypertrophy and Dilatation.

Dr. FINNY exhibited the heart of a woman, aged 55, which presented dilatation of its right chambers and dilatation and hypertrophy of the left ventricle. During life the patient was dropsical, but not ascitic. The heart's action was excited and irregular: the area of precordial dulness increased, and the impulse undulatory and variable. No bruit was detected. The lungs were emphysematous. There was a large fibrinous clot extending from the right auricle, to the appendix of which it was firmly attached, into the superior vena cava.

Morbid Results of Stricture Urethræ.

Dr. MCDONNELL exhibited the urinary organs of a man, aged 32, for many years the subject of a stricture (which, however, was easily cured by operative means), remarkably illustrative of the effects of this disease on the bladder, ureters, and kidneys. The bladder was contracted, its surface rough and coated with lymph; the ureters enormously enlarged, and their walls thickened; the kidneys were enormously dilated and filled with muco-purulent urine. Neither the right testis or vas deferens could be detected.

Abscess of Cerebellum.

Dr. T. E. LITTLE showed a specimen, due to disease of the petrous portion of the temporal bone. The subject of the disease was a woman, aged 30, who had had otorrhœa for ten or twelve years. Three weeks prior to her admittance into Hospital, symptoms of intra-cranial engagement set in, *e.g.*, pain in the ear and head, slight photophobia, lethargy, persistent vomiting, and sleeplessness. There was but slight deafness and no facial palsy. On examination after death an adhesion was found between the right hemisphere of the cerebellum and the petrous portion of the temporal bone. There was one abscess in the cerebellum about the size of a walnut, and another which separated the dura mater from the bone, which it had penetrated behind the internal auditory meatus. The lateral sinus was healthy, but the petrosal sinus was plugged. Death resulted from effusion into the lateral ventricles.

Chronic Otitis Media—Arachnitis.

Dr. BARTON exhibited the left temporal bone of a boy aged 13 years, who had had chronic otorrhœa. When admitted he was partially paralysed; his pulse was rapid and he suffered from insomnia. The right eyeball became protruded, and the conjunctiva was inflamed.

On *post mortem* examination evidences of extensive arachnitis were found; the base of the brain being coated with lymph. The right eyeball was bathed in pus, which was due to a perforation of the lateral sinus from the mastoid cells, in consequence of destructive inflammation of the middle ear.

Saturday, February 20th, 1875.

Aneurism of Thoracic Aorta.

DR. NIXON exhibited an interesting specimen taken from the body of an intemperate man, æt. 40. The symptoms during life resembled those of the last stage of phthisis. Loud stridor, especially on inspiration; paroxysmal, laryngeal cough *(tussis clangosa);* marked pulsation in carotids, and the physical signs of aortic patency, with *two* distinct tones audible in the carotid vessels; no dysphagia or aphonia; and bronchitis. Death was sudden. The aorta was thickened and dilated, and its valves were incompetent. It was remarkably atheromatous, and studded with calcareous patches. From the posterior portion of the termination of its arch sprang an enormous aneurism, which had passed backwards and eroded the vertebræ, compressed the upper lobe of the lung, and ruptured into the left pleural cavity, which was found to contain between three and four lbs. of clotted blood. The recurrent laryngeal nerve was considerably pressed upon by the anterior wall of the aneurism.

Encysted Pericarditis—Fatty Heart.

Dr. FINNY said that the specimens he presented were removed from the body of a married woman, aged 66. She had never had any severe illness—and never either syphilis or rheumatism—until shortly before she was admitted into Hospital with cardiac dropsy, dyspnœa, and palpitation. Her face was congested and cyanotic, and her hands blue. The precordial dulness was extended, and the right jugular vein varicose and pulsatile. She gradually sank, and at the *post mortem* examination the pericardium was found adherent to the anterior surface of the heart, which itself was covered by a layer of yellow fat. There was an encysted pericarditis of the upper portion of the sac which communicated by a fenestrated opening with the left pleural cavity. At the right side of the pericardium was a bony plate. The heart was fatty, and its right cavities somewhat dilated. The pulmonary valves were slightly diseased. The apex of the left lung contained some spots of a cartilaginous nature. The liver was small and square-shaped, and the spleen very hard.

Congenital Deformity of the Clavicle.

Professor BENNETT exhibited three specimens, which, in their main points, were identical with the example of a similar malformation of this bone exhibited by him to the Society two years ago (*vide* full description in the IRISH HOSPITAL GAZETTE, Vol. I., p. 62.) All these specimens presented a double articulation on the enlarged acromial extremity of the bone, and were all of the left side. A section of the bones demonstrated that the deformity was not due to fracture.

Sarcoma of Tibia with Visceral Recurrence.

Dr. MCDONNELL presented several morbid specimens illustrating in a remarkable manner the pathology and clinical characters of sarcoma. The patient from whose body the specimens were taken was a drayman, æt. 21, who, in May, 1874, was admitted into Steevens' Hospital with a painful swelling at the upper third of the right tibia, which he ascribed to an injury to the leg from a cask striking it. This swelling, which presented a uniform, resilient and elastic sensation of fluctuation to the touch, was punctured, giving exit to a small quantity of serum and affording complete relief to pain. A small, fungoid growth subsequently sprouted from the opening, and the limb continued to enlarge. Amputation was proposed, but declined. The patient left Hospital in July, and was re-admitted on Dec. 18th, the limb having now enlarged to an enormous size, the tumour measuring 27½ ins. in circumference, and 13 ins. in its longitudinal axis. The tibia was enormously expanded, and there had been considerable loss of blood from the fungus, from which there was also a copious fœtid discharge. Amputation was performed as a palliative measure. Shortly after the operation his urine assumed a peculiar appearance, which proved to be due to the presence of blood in it. He was finally seized with excessive pain in the back, and fourteen days before death became paraplegic. The reflex phenomena were tolerably well-marked, but motor power and thermic perception was completely lost, whilst sensibility was diminished. An examination of the tumour of the amputated leg, showed that the mass had eroded the bone, assailed the joint, and deeply infiltrated the surrounding soft structures. It was composed almost entirely of small round cell sarcoma. After death the bladder was found enormously thickened and ulcerated. Between the bladder and rectum was a mass of disease, evidently identical with that in the tibia. The kidneys were anæmic, but healthy. In the lungs were numerous nodular deposits of a similar sarcomatous nature, situated mainly in the fringes of these organs. The inguinal glands were not enlarged or implicated in the disease. On examining the spinal marrow, a similar mass to those existing elsewhere was found close to the ganglia of the two lower dorsal nerves, into which these nerves passed.

Dilatation of Right Heart.—Slaty Induration of the Lung.

Dr. NIXON exhibited the lungs and heart of a woman, aged 46, who had been admitted under his care into the Mater Misericordiæ Hospital, suffering from capillary bronchitis. On the fourth day after admission the patient complained of severe cardiac pain; there was intense dyspnœa, and lividity of the face. On examining the heart an increased area of dulness to the right side was observed, and a systolic tricuspid murmur was heard at the junction of the fifth left costal cartilage with the sternum. This murmur was accompanied by double pulsation in the external jugular veins. To obviate the danger of death from paralysis of the right side of the heart, four ounces of blood were taken from the median basilic vein. The cardiac pain was removed by the venesection, and the woman lingered on for some forty hours afterwards. At the autopsy the left side of the heart was found empty; the chambers and orifices were normal. The right ventricle and auricle were greatly dilated, hypertrophied, and filled with black, clotted blood. The right auriculo-ventricular orifice admitted with ease seven fingers. There was no commensurate increase in size of the curtains of the tricuspid valve. The pulmonary artery was dilated, but free from atheroma. The lungs were emphysematous, and in parts œdematous; the bronchi intensely congested. The apex of the left lung presented a patch of *slaty induration* and clusters of black granules were found studded over both lungs beneath the pleura. The condition found was similar to that described by Virchow as occurring in *peri-bronchitis chronica*. Dr. Nixon thought the specimen interesting as illustrating the development of tricuspid regurgitant murmur from acute dilitation of an already dilated chamber. It seemed evident that this had been brought about by the great obstruction to the pulmonary circuit during the acme of the capillary bronchitis which existed.

SURGICAL SOCIETY OF IRELAND.

Friday, February 5th, 1875.

EDWARD HAMILTON, M.D.,
Vice-President R.C.S.I., in the Chair.

Recent Therapeutic Remedies.

Mr. W. Handsel Griffiths exhibited a very interesting collection of specimens of certain recent remedies, and described, succinctly, the characters, properties, and uses of each of the drugs exhibited. The specimens shown comprised (1) *Goa powder*, the Indian remedy for ringworm, recommended by Dr. Fayrer. (2) *Condurango bark*, the vaunted specific for cancer, but which on trial had proved a failure. (3) *Guarana*, obtained from the Brazilian plant, *Paullinia Sorbilis;* so often found useful in sick headache, and also strongly recommended by Mr. E. Rawson, of Carlow, in the Irish Hospital Gazette (Vol. II., p. 120), in cases of lumbago and rheumatic affections of muscular and fibrous structures. (4) *Rhamnus frangula*, a decoction of the bark of which was stated to be an agreeable aperient. (5) *Jaborandi*, the new sialogogue and diaphoretic. Mr. Griffiths had personally experimented with this drug, taking an infusion made with forty grains of the leaves, and had experienced to a marked degree the diaphoretic effects ascribed to the drug. (6) *Boldo*, lately introduced as a tonic. The leaves of this plant, a native of South America, are studded on their surface with large glands, which furnish the active principle of the drug. (7) *Eucalyptus globulus*, recommended also as a tonic, febrifuge and anti-periodic, the leaves of the plant being the officinal part. (8) *Gelseminum sempervirens* (yellow jasmin). A tincture prepared from the root of the plant, is extensively used as a remedy for neuralgia, etc., in America.

Dr. Eustace could bear his testimony to the value of guarana in the treatment of nervous headache. He had given it in several cases, and had noticed that about twenty minutes after its administration there was remarkable coldness across the forehead, and that then the headache abated. The doses varied from half a drachm to a drachm.

Dr. Henry Kennedy had also found that guarana gave relief at the time in headache, but that the pain recurred. He lamented the vast number of new remedies that were now coming forward, and thought that they could do very much more by sticking to some of the old fashioned remedies than by running after new ones.

Dr. Stewart agreed with the remarks of Dr. Kennedy.

Dr. Quinlan disagreed with the objectors to the introduction of new remedies. Although the remedies we have already should never be lost sight of, and should receive careful study, it should not be forgotten that medicine was a progressive art, and that when new remedies were brought forward, some of which might prove of great value, they ought to get a fair trial. It must be remembered that the old remedies were new remedies once, and if they had been thrust aside without a trial, they would never have occupied the position they have now. All new drugs should be tested physiologically, and if they were not found to answer they should be laid aside.

Dr. R. Montgomery and Mr. Stapleton had both given guarana with benefit for the relief of nervous headache. Mr. Stapleton having read of guarana being recommended in lumbago,(1) had, on two or three occasions, given it in that affection, using the French preparation, and giving the doses every two or three hours, and had found a most decided advantage from it. He had used it himself when suffering excruciating pain from lumbago, and got decided relief. Guarana was not disagreeable to the taste, and did not cause sickness or loss of appetite.

Dr. Duffey could also add his personal experience as to the efficacy of guarana in cases of sick headache. He had taken it himself with most beneficial results, and had given it to persons similarly affected with great advantage. The preparation he used was the same as that referred to by Mr. Stapleton, viz., Grimault's, a dose being made up in one package.

Mr. H. Gray Croly thought the paper was one of great interest to the Society, and that Dr. Griffiths deserved credit for the trouble he had taken in bringing these new medicines under their notice. It was a weak thing to stand up and condemn drugs because they were new. Was there any practitioner who would like to give up hydrate of chloral? It was a new drug, and had filled up a gap long existing, and if any of the medicines mentioned by Dr. Griffiths that night filled a similar place, it would be the addition of a new and valuable drug.

Dr. Benson, as an old practitioner, said, that nothing delighted him more than to hear of these new remedies. There was hardly any remedy that could be introduced which might not prove beneficial if followed up with care, and its effects carefully studied.

A Method of curing some of the contractions resulting from Burns and Scalds.

Mr. F. I. B. Quinlan read a paper with the above title, in which, after alluding to the difficulties which attended the treatment of these cases, he detailed a mode of operating for the removal of the cicatricial web, such as is commonly seen between the arm and side, after severe burns of the trunk, on what he termed the "earring principle." Arguing from the mode in which the lobes of the ears are pierced by jewellers for rings, he thought that if he pierced the cicatrix of a burn with a trocar and cannula, and subsequently introduced a smooth glass rod, or other similar substance, which was removed and cleansed at daily intervals, he could thus form a "tunnel" in the cicatrix which would "skin over;" and that when this was effected he could then, by inserting the point of a bistoury into the tunnel, divide the web, leaving a strip of cuticle at one end of the incision, which he hoped—conjoined, of course, with careful dressing—would prevent a recurrence of the contracting process. In several of the cases in which he tried this plan he failed in all but two. He forgot the difference between operating on healthy tissue, such as the ear, and upon a cicatrix. The tunnel would never skin over satisfactorily. Therefore, in the case which he now brought before the Society—that of a girl whose right arm was attached to the side from the internal condyle to the axilla—after having been obliged to give up the above plan in consequence of an attack of erysipelas, he tried the following procedure with the most satisfactory results. Having formed a tunnel, as previously described, at the upper angle of the web, he introduced an elastic cord through it, and tied it below in the usual manner. The ligature cut through the cicatrix in three days; the small strip of tissue then remaining being divided by an ecraseur, without the loss of any blood. Pieces of lint spread with calamine ointment were now placed respectively on the side, the arm, and in the axilla. A stout India-rubber elastic band, such as is used for keeping books, etc., together, was then passed under the arm, into the axilla and over the shoulder, thus exercising pressure on the upper angle of the incision in the axilla. Everything now progressed favourably; the cut surfaces, with the exception of that portion in the axilla pressed on by the band, healed in a short time. A lighter elastic band was now substituted for that previously employed, and in a few days the axillary ulcer also was healed. It is now twelve months since this oper-

(1) Irish Hospital Gazette, Vol. II., p. 120.

ation was performed, and no tendency to recurring contraction has shown itself. In conclusion, Mr. Quinlan recommended this method to the favourable notice of Surgeons, and characterized it as being safe, expeditious, and simple.

The CHAIRMAN said that any suggestion that gave assistance in dealing with these cases, which might be regarded as a sort of opprobrium of surgery, being very difficult to manage and often most unsatisfactory in their results, was valuable.

Mr. STAPLETON remarked that years ago a somewhat similar procedure to that proposed by Dr. Quinlan used to be adopted in these cases; the cicatrix being perforated with a lead wire, which was left in until the part healed round it, and then the wire was gradually twisted until it had cut through. He had used this method in several cases, but they did not turn out satisfactorily. It was hard to say how operations in these cases would ultimately turn out. The only effectual proceeding, in his opinion, was the removal of the entire cicatrix and subsequent performance of a plastic operation.

Mr. WHEELER thought that the removal of the cicatrix by the knife, adopting Esmarch's apparatus where practicable, caused much less pain to the patient, and was preferable to the plan proposed by Dr. Quinlan.

Mr. H. G. CROLY lamented the absence of ordinary care that gave rise primarily to these contractions. He detailed some cases he had operated upon, and said that in one, at present under treatment, in which the little girl's arm was bound up at a right angle to the body, he had used Esmarch's bandage, and dissected away the entire cicatrix and fixed the limb in a splint. He had also determined to try skin grafting in this instance, and he trusted that by putting new tissue where the silvery cicatrix had existed, the cure of the case would be facilitated.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, February 18th, 1875.

HENRY KENNEDY, M.B.,

Vice-President, in the Chair.

The Significance of "Congestion Papilla," or "Choked Disc" in Intra-Cranial Disease.

MR. H. R. SWANZY said he desired to bring forward this subject in a general way, as there still seemed to be some doubts as to the true nature of the congestion papilla, a better name for which was intra-bulbar neuritis (Schmidt), there being much more than congestion or excessive hyperæmia present. It was in fact a tumefaction of the intra-bulbar end of the optic nerve. Having described the ophthalmoscopic appearance of a congestion papilla, the author said that there was no doubt but that its immediate cause was a strangulation of the bulbar end of the optic nerve, which strangulation produced engorgement of the retinal veins, and a serous exudation at the lamina cribrosa, where the constriction takes place. This constriction was produced in one of two ways. First, by the direct pressure of an orbital tumour, or of the product of an inflammation in the orbit on the nerve itself in this part of its course; and second, by an increased pressure within the cranium, by which the fluid is driven out of the sub-arachnoid lymph-space into the sub-vaginal lymph-space of the optic nerve. Great pressure is thus brought to bear on the optic nerve in its entire course; the flow of venous blood is consequently retarded, and serous exudation takes place at the optic disc. This was the accepted explanation of the mode of origin of the congestion papilla in most cases of intra-cranial diseases where it occurs. A tumour of the cerebellum, or of one of the lateral hemispheres, may just as readily give rise to a congestion papilla as if it were situated in the corpora quadrigemina. It is not necessary that the optic nerve should be directly implicated in the disease either at its origin or anywhere in its course. The cranium being a closed cavity, wherever the new growth within it happens to be, it will have the effect of increasing the pressure equally in every direction, and of forcing the lymphatic fluid out of the sub-arachnoid into the sub-vaginal space. According to Dr. Clifford Allbutt, meningitis, hydrocephalus, and an intra-cranial tumour may give rise to congestion papilla, and most observers allow that the latter is the most frequent cause of this appearance. The only wonder is that congestion papilla is not found in every such case, if the accepted mode of its production be the true one. Mr. Swanzy has always inclined to an opinion that the rate of growth of a tumour might be the ruling factor in this respect. If the tumour increases in size very slowly, the parts may be enabled to accommodate themselves to the pressure, or by the gradual absorption of brain substance, there might actually be no increase of intra-cranial pressure produced. On the other hand, if the tumour from the beginning grows very rapidly, or, although growing slowly at first, if it afterwards advances quickly, we can understand that, for converse reasons, it would thus be more likely to cause congestion papilla. As regards the occurrence of congestion papilla in hydrocephalus, Mr. Swanzy had never seen any other alteration in that disease than atrophy of the optic nerve; as was also the result of the extensive experience of von Graefe with regard to meningitis as a cause of congestion papilla. It was the author's opinion that true congestion papilla, dependent on any form of meningitis is extremely rare at any time of life, and that when it does occur it is almost always in the meningitis of children or young children. He had had the opportunity from time to time of examining five or six children altogether with symptoms which were considered indicative of meningitis. In all but one of these cases the ophthalmoscopic appearances were either negative, or consisted merely in congestion of the central vein of the retina, with some hyperæmia of the disc. In this case the appearances presented, which Mr. Swanzy described at length, were different, and suggested the thought that perhaps some of the cases described as congestion papilla with meningitis were not cases of true congestion papilla, but of this other form which resembles it. It is a recognized fact that it is sometimes by no means an easy matter to decide whether a given case is one of congestion papilla or of descending neuritis. A diagnosis by aid of the ophthalmoscope should therefore never be attempted unless the appearances are so well marked as to admit of no doubt about their nature. Mr. Swanzy observed, in conclusion, that while true congestion papilla is not pathognomonic of intra-cranial tumours, it is extremely rare as a symptom of any other intra-cranial disease. It has been observed in a few cases of meningitis, chiefly in children, so that its value as a symptom of cerebral tumour is even greater in adults than in young people.

Hæmorrhagic Infarction of the Lungs.

Dr. GERALD F. YEO read a paper on the anatomical changes found in the lungs in cases of cardiac hæmoptysis, which was formerly described by Laennec under the title pulmonary apoplexy, for which name hæmorrhagic infarction has been more recently substituted. A few days after their production the lesions appear as isolated spots of intense engorgement, varying in size from one to ten centimeters in diameter, scattered through the lungs in irregular positions, there being usually as many as three or four. They are extremely hard, almost quite black, and perfectly airless, one of their most striking characters being their sharp demarcation from the surrounding lung tissue, which remains healthy

and retracts so as to allow the hard nodules to stand out prominently. These are very constantly conical in shape, the apex of the cone being situated next the root of the lung, and the base towards the surface, where it shows as a circular knob. Their section is finely granular and even, the vessels in the cone enter at its apex, and are always found plugged with adherent, fibrinous clots. The bronchi are empty, or contain bloody mucus. The clinical history is often obscure; sudden local pain, with dyspnœa, followed by, in a few hours, more or less profuse hæmorrhage occurring in the course of old heart disease, are the chief indications of the occurrence. The area of condensation is commonly too small, and its position too variable, to produce any very characteristic physical signs. The common explanation given since Laennec's description was, that the hæmorrhage was due to rupture of the pulmonary capillaries by means of an abnormally strong right heart. Sir Thomas Watson, however, attributed the occurrence of pulmonary apoplexy to impediment at the left side, and explained the local infarctions as a mechanical accident, following hæmorrhage into the bronchus, some of the blood being drawn into the air vesicles and distending them instead of air. This view Dr. Yeo did not think tenable, as it does not accord with the common clinical history; it does not explain the pathological appearances; two minutes, the time the case on which the theory was founded, is too short for the production of infarctions, and it seems physiologically impossible that the reserve residual and permanent air usually contained in the air vesicles, could be replaced with blood in a few inspirations. Virchow first explained by his investigations on embolism the following constant characteristics of these engorgements. Plurality, demarcation, scattered distribution; conical shape and vascular plugs. He showed that a free body or embolus in the circulation must become impacted in some vessel, and there set up changes which depend on the character of the substance, the freedom of arterial anastomosis, and the efficiency of the venous valves of the part. Simple œdema, inflammation, gangrene, abscess, atrophy, and not uncommonly infarction, simple or hæmorrhagic, followed the occlusion of a vessel by such a plug. Cohnheim confirms Virchow's observations, and describes the various steps in the process, as seen under the microscope, to be dilitation of the vessels; to and fro movements in blood; œdema and emigration; hæmorrhage; and finally, stasis. The explanation of this hæmorrhage, as given by Ludwig, namely, the increased pressure in blocked capillaries, which act as blind ends to the neighbouring arteries, appears insufficient, so that Dr. Yeo thought we must rather agree with Cohnheim that the starvation of the walls of the vessels renders them incapable of efficiently doing their duty, which is to restrain the blood in their cavities. The emboli causing infarction in heart disease are readily supplied from the little clots so commonly formed where the blood current is retarded among the trabeculæ in a dilated right ventricle, or in the auricular appendix. Besides the influences mentioned above as governing the result of embolic impaction, there are two others which the author observed were very important in controlling the amount of bleeding in the human subject, and which, as they cannot be imitated by experimental pathologists, have been overlooked by them: these are, disease of the pulmonary vessels, and hypertrophy of the right side of the heart. The changes in the right heart are usually secondary to disease in the left, and in the transmission of the injury back through the lungs the vessels must suffer. One or both these are essential to the extensive hæmorrhage which proves so often fatal. According to Dr. Yeo, the probable chronological sequence of events might be thus enumerated :—1. Prolonged impediment to pulmonary circulation. 2. Injury to the pulmonary vessels. 3. Dilatation and hypertrophy of right heart. 4. Production of cardiac thrombi. 5. Separation of portion of clot. 6. Impaction of embolus in pulmonary artery. 7. Infarction, with more or less bleeding.

Several specimens of infarctions were shown to illustrate the anatomical characters of the affection, also the hearts of two patients who had died of profuse pulmonary hæmorrhage. In both, the right cavities were dilated and much hypertrophied, and the pulmonary arteries diseased. In one there was no sign of disease of the valves or orifices at the left side. The following conclusions were drawn :—1. Embolic infarction is a common cause of the hæmoptysis in heart disease. 2. The impaction of the embolus fully explains the various anatomical characters of the infarction as well as the hæmorrhage. 3. Changes in the right heart produces the coagulation which supplies the embolus. 4. The disease of small pulmonary vessels is often associated, and aids in producing the bleeding. 5. Bleeding into bronchial tubes cannot produce true hæmorrhagic infarction. 6. Valve disease of left side is a common, but not invariable, starting-point of all these pathological processes.

Dilatation of the Stomach.

Dr. A. W. Foot read the notes of a case of great dilatation of the stomach, consequent upon narrowing of the pylorus, the result of an ulcer situated in that neighbourhood, characterized by periodic vomitings of large quantities of acid, fermenting liquid, rich in sarcinæ. The patient was a country, labouring boy, æt. 19. As he lay in bed the stomach seemed to lie flattened out over the whole abdomen, which gave the stomach note on percussion from the left nipple to either iliac fossæ; percussion, moreover, excited muscular movements in the stomach quite visible and palpable. When he stood up, the belly swagged forwards, the stomach and its fluid contents making a protuberance below the umbilicus, which, from the fluctuation and dulness, simulated ascites. Eighteen months prior to his admission he had received a hurt in wrestling by which Dr. Foot inferred that the coats of the stomach, near the pylorus, had been injured; that ulceration had ensued, of which the copious hæmatemesis which he had six months subsequently, was a result, and that the cicatrization or thickening about this ulcer, had, in the twelve months since then, narrowed the pylorus so as to prevent the stomach emptying itself in the ordinary way. An unfavourable prognosis was made, but treatment was directed, on the one hand, towards bracing up the muscular coat of the relaxed stomach, in the hopes of making its contractions sufficiently energetic to overcome the pyloric obstruction; and, on the other hand, towards rectifying the fermentative condition which the chronic gastric catarrh had produced. The former indication was attempted by bandaging the stomach, the use of hypodermic injections of liquor strychniæ, and by faradisation, and afterwards galvanisation, of the stomach; but as regards the latter indication the usual anti-fermentive treatment (carbolic acid, hyposulphites, creasote), seemed to have no effect. Soon after his admission, therefore, Dr. Foot began to use the stomach-pump, pumping in tepid water in which bicarbonate of soda was dissolved. From these washings out the patient derived much relief. Indications, however, were soon afforded that part at least of the stomach was in a state of paralysis, and that it was emptied chiefly by the action of the abdominal muscles; because percussion after use of the stomach-pump showed the size of the stomach to be little altered, and that the liquid contents had been replaced by air. He sank under a third attack of a "bilious" nature, which lasted a week, and in which the vomiting became so constant as to preclude the administration of any food by the mouth. The character of the

vomited matters at this period completely changed from the barmy appearance they first presented, and were replaced by bilious liquid; he suffered much before his death from incessant and uncontrollable hiccough. When the abdomen was opened the cavity appeared almost wholly occupied by the stomach; water could not be made to pass, except in drops, from the stomach into the duodenum, but could be made to pass, though with great difficulty and slowness, in the reverse direction. The pylorus was so contracted as to only admit of a very fine glass rod being *forced* through it, and the antrum pylori was occupied by a round, depressed ulcer, the size of a florin. The lining membrane of the stomach was thickly coated with a very tenacious mucus; the organ externally appeared much more vascular than usual, the veins being numerous, large, and tortuous. There were appearances of peritonitis in flaky lymph upon the intestines. There were no indications of irritation of the interior of the stomach from the use of the stomach-pump tube, which had been introduced twenty-six times. Dr. Foot remarked that among the *clinical observations* which this case suggested were the following:—That dilatation of the stomach, as a morbid and serious condition, is distinguished from its temporary dilatation by food or gas, by its speedy return, in the latter case, to its natural size when emptied, and that it is most usually symptomatic of obstructed pylorus. The diagnosis of the fluctuating protuberance made by the baggy stomach in the erected position from ascites, though it was not difficult in this case, may yet become so when the stomach is adherent to the abdominal wall. Even where this was not the case, the operation of tapping has been performed upon a dilated stomach in mistake for ascites. It was observed in this, as in similar cases, that the distance between the cardiac and pyloric orifices was not much altered—that is, that the expansion of the stomach was not at the expense of the lesser curvature, but at that of the greater, which, insinuating itself between the layers of the great omentum, descended to the pubis, thereby increasing the difficulty of food, which had fallen into such a gulf, reaching the pylorus. The great curvature from œsophagus to pylorus measured 31 inches, the lesser curvature 6½.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, February 13th, 1875.

LOMBE ATTHILL, M.D.,
President, in the Chair.

On Metro-peritonitis following the Use of the Ordinary Female Syringe—A Plea for the Vaginal Irrigator.

Dr. Thos. More Madden said that the ordinary vaginal syringe is the most frequently used instrument in gynæcological practice, being employed in nine-tenths of the cases of real or suspected uterine disease, and as it is freely ordered by medical men, and habitually used by patients without any special caution or apprehension of possible danger, Dr. More Madden thought that the history of a case showing that this instrument is by no means as harmless as it is commonly supposed to be, was not undeserving of the consideration of the Obstetrical Society. The case was one of intense uterine colic followed by severe metro-peritonitis which came on suddenly during the use of an astringent injection with the ordinary vaginal syringe. The metro-peritonitis was accompanied with almost complete collapse, and attended with uncontrollable retching by which the patient's life was kept in extreme jeopardy for several days. These symptoms were evidently caused by the injected fluid having passed through the patulous os into the cavity of the uterus, which was in a state of subinvolution at the time, and by the escape of a portion of it through the dilated Fallopian tube into the peritoneal cavity. However, the possibility of such an accident being produced by the use of the vaginal syringe is practically ignored by the majority of gynæcologists, and although similar cases are comparatively rare, yet the mere possibility of this occurrence in any case in which the syringe may be employed should render physicians more cautious than they generally are in this recommendation of this universally used, and, he would add, much abused instrument, the possible dangerous effects as well as the inconveniences and imperfections, together for a substitute for which he had brought under the consideration of the Society a couple of years previously.(1) The force with which fluid may be injected into the vagina, or even into the uterus by the common syringe may, as in the foregoing case, be so great as to occasion the most injurious effects, and in any case its action must necessarily be very imperfect. To produce any permanent benefit by injections in a case of inflammation or congestion of the cervix uteri for example, the injected fluid must be kept in contact with the inflamed part at a certain uniform temperature for a long time continuously, and this cannot possibly be accomplished with the ordinary syringe, as the fatigue of working that instrument is so great, and the position of the patient is so irksome during its use as to prevent its being employed for more than a few minutes at a time. To obviate these inconveniences various contrivances have been devised by gynæcologists. For his own part, Dr. More Madden preferred the improved utero-vaginal irrigator he had exhibited before the Obstetrical Society two years ago, and a drawing of which was published in the Second Volume of their proceedings. With that instrument the accident now under consideration could not possibly have occurred. This irrigator is very portable, can be readily used wherever a vessel of water is obtainable, and is capable of sending a gentle flow of water, plain or medicated, and at any temperature into the vagina, or even into the uterus if ever that measure, which is very rarely required in gynæcological as distinguished from obstetric practice, should be considered expedient. And this, moreover, in any position, and for any length of time that may be advisable, and without causing the patient the slightest fatigue. The advantages of an irrigator over the awkward and imperfect vaginal syringe generally used, leads Dr. More Madden to recommend any gynæcologists who have not hitherto done so to give a fair trial to this simple, easily constructed and easily used instrument as a substitute for it in gynæcological practice. Cases such as that just reported were also, the author said, of interest in their bearing on the recent discussion as to the safety of strong astringent injections into the uterus in the treatment of *post partum* hæmorrhage. Against this practice it had been argued that there was danger of forcing the injected fluid through the open uterine sinuses into the circulation, and thus occasioning embolism, or of driving it through the Fallopian tubes into the abdominal cavity, and thus causing peritonitis. As on a former occasion when this question was under discussion in the Obstetrical Society, he, Dr. More Madden, had expressed an opinion as to the improbability of such an accident, he now felt bound to state that the foregoing case had somewhat modified his views on this point. For if metro-peritonitis could be excited by a fluid injected into the uterus five weeks after delivery, it was of course still more probable that the same effect might thus be occasioned immediately after delivery when the uterine vessels and passages were far more likely to be pervious. But the possibility of such an accident would not, in any degree, prevent him from again resorting to this remedy, the value of which he had learned by long experience, when necessary, that is to say in any urgent case of severe *post partum* hæmorrhage which could not be stopped by any other means.

(1) *Vide* Irish Hospital Gazette, Vol. I., p. 223.

IRISH HOSPITAL GAZETTE.

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Hospital Reports.

MATER MISERICORDIÆ HOSPITAL.

NOTES OF SURGICAL CASES.

By MR. P. J. HAYES,
Surgeon to the Hospital.

NO. II.—CASE OF STRICTURE OF THE URETHRA WITH RETENTION OF URINE, TREATED BY MR. COCK'S OPERATION.

M. K.——, æt. 54 years, married, by occupation a labourer, admitted to Hospital September 10th, 1874, suffering from stricture of the urethra and stillicidium urinæ.

PREVIOUS HISTORY.—When 18 years of age he contracted a gonorrhœa, and some four years subsequently got a second attack of like nature. He was not treated by injections. About a year after the second gonorrhœa he noticed the stream of urine, during the act of micturition, to be small in volume and fantastic in appearance. By degrees difficulty in passing water became marked, and this increased until the year 1865, when he was attacked with retention of urine, and became a patient in a County Hospital or Infirmary. The surgeon, under whose care he was, succeeded in passing gum elastic instruments, and dilated the urethra until a No. 10 catheter could be passed. The patient was then discharged from Hospital, but cautioned to call occasionally in order that an instrument should be used, and much contraction of the stricture or strictures prevented. The man neglected the good advice given to him, went on from bad to worse, until nine months before his admission to the Mater Misericordiæ Hospital, when difficulty of urinating became very great, and fearing a second attack of retention, he again applied at the County Hospital, and was admitted under the care of the surgeon who had relieved him on the former occasion. Now, however, no instrument could be passed, and he suffered from retention for forty-eight hours. Chloroform, opium, and hot-baths at length caused remission of the severe symptoms, and he was able to pass water in drops. During his stay in the Infirmary no impression could be made upon the stricture, so he was advised to place himself under the care of some Hospital surgeon in Dublin. When taken into the Mater Misericordiæ Hospital he was in a wretched condition, the glans penis being extensively ulcerated from the constant drop-by-drop flow of fœtid urine, his body covered with pediculi, and his skin exhaling a urinous odour.

Mr. Tyrrell took charge of the man at first, and tried with every variety of instrument to make an impression upon the stricture, which existed some four inches from the meatus urinarius. With good general treatment the man's condition was somewhat improved, and the *phosphatic alkaline* urine became less offensive and slimy, but the stricture did not yield in the smallest degree, and Mr. Tyrrell wished that his surgical colleagues should in turn devote some time and pains to the treatment of this old and obstinate affection. Thus it was that the case passed into my hands, and hence I now write in the first person singular. As all kinds of bougies and soft instruments, catguts and whalebones had been used without effect, I commenced a process of tunneling, or enlarging the passage through the strictured portion of the urethra by first entering the point of a No. ½ silver catheter into the opening of the anterior structure, and subsequently dilating the part with bulbous steel instruments, of various sizes, which had been made to order by Messrs. Weiss, and employed by me with success in a somewhat parallel case. Within ten days I managed to dilate two strictured parts, but a third barrier resisted all my efforts. In the meantime the patient was supplied with nourishing diet, and such treatment as may be summed up by the mention of opium, triticum repens, warm baths. As feverish symptoms of decided character appeared, I was obliged to discontinue in great measure the use of instruments.

On the morning of October 27th the patient began to exhibit signs of retention. Also some vomiting took place, the tongue was of a dirty brown colour, the pulse weak, and it rose to 120 per minute. He was ordered an enema of turpentine as the bowels were not free and the abdomen was tympanitic; half-grain doses of opium were given every third hour, hot poultices applied over the abdomen, and an aspirator was kept at hand so that the bladder might be relieved should more urgent symptoms appear. The urine, however, began again to dribble away, warm baths being used from time to time. The patient now refused food, and his general condition did not undergo any improvement. Delirium at night, restlessness, stupidity, rigors, &c., occurred, and continued, and it became evident that death from a form of uræmia must ensue,

unless free communication between the bladder and surface could be established.

In consultation with my colleagues, Dr. Cruise, Mr. Tyrrell, and Dr. Coppinger, it was unanimously agreed that the operation originated by Mr. Cock,*—"tapping the urethra at the apex of the prostate unassisted by a guide staff," and recommended by the high surgical authorities who have had experience of its efficacy, should be practised in the present case.

On the morning of November 4th the rectum having been cleared out by means of a simple enema, and the perineum shaved, the patient was brought under the influence of ether, and placed upon the operation table in the lithotomy position. I then introduced the forefinger of the left hand into the rectum and felt for the apex of the prostate gland. The prostate was small, and situated high, so that it was not a very easy matter to define exactly the apex position. However, I was able to do so, and then taking a broad-bladed scalpel, the back of which had been ground to a cutting edge for some distance from the point, with my right hand I entered it through the skin in the middle line of the perineum, about half an inch in front of the anus, and pushed it steadily on with its point, directed towards the apex of the prostate, which was commanded by my left forefinger. At length I could feel that the point of the knife was close to my finger, and corresponded exactly to the apex of the gland. I next moved the blade a little so as to make sure that the sharp point should incise the floor of the urethra, not merely puncture it, and then I withdrew the knife, enlarging the cutaneous wound as I did so, still keeping the left forefinger in the rectum, I passed a bullet probe along the track made by the knife, and satisfied myself that I could without difficulty introduce it into the bladder. Knowing the restless condition of the patient, I selected a No. 8 soft, bulbous catheter, which I guided into the bladder with the aid of the probe. This was secured in its place by means of tapes attached to a waist-belt.

Little blood was lost during the operation, and the patient was carried to a well warmed bed. The ether had an intoxicating effect upon him, and he could not be kept quiet for some time, consequently the catheter which had been passed into the bladder became displaced and I had to re-introduce it before leaving the Hospital. Half-grain doses of quinine and opium were given every third hour; towards evening the instrument a second time slipped out, but the resident pupil was able to pass it in again without trouble. The patient continued very uneasy during the night, but towards morning he slept for two hours. On the following day he took brandy and egg mixture; also a large amount of milk, and that night he slept well. Urine flowed freely through, and at the side of, the catheter; the opium was discontinued.

November 6th.—The man able to take half a pint of beef tea every second hour, and at night a dose or two of brandy and egg mixture; pulse 88.

7th.—Catheter removed, as the urine escapes easily through the wound; steady improvement.

12th.—Catheter re-introduced for a time, tongue clean, pulse 76. Patient sleeps well, appetite good. When he makes an effort to pass water some escapes per urethram as well as through the wound.

By the 20th November he was so much better that I resumed my attempts to dilate the stricture, but as he complained of soreness in the urethra I did not frequently make a trial. Early in December he was able to be up, and could retain urine for about two hours at a time; the only medicine now prescribed for him was benzoic acid in decoction of triticum repens, and I directed my resident pupil to pass a soft catheter occasionally through the perineal opening; also placing instruments at his disposal, I told him to treat the stricture by careful attempts at gradual dilatation. I have only to add that the patient became very strong and able for work, but I kept him on in Hospital hoping to succeed in dilating the urethra. However, in this respect I was disappointed, and the man returned to his home on February 21st in the present year, perfectly satisfied to pass urine through the artificial aperture for the rest of his life, but in every other respect strong and well. I am not aware that Cock's operation has been practised heretofore in Dublin, therefore, I publish my case with a view to render better known this very valuable and comparatively safe operation, which enabled me to rescue my patient from a most dangerous and distressing condition.

* See *Guy's Hospital Reports*, 1866.

NORTH INFIRMARY, CORK.

NOTES OF CASES FROM THE SURGICAL WARDS.

Under the care of DR. SHINKWIN,
Surgeon to the Infirmary.
Reported by MR. MARTIN HOWARD, *Resident Pupil.*

PENETRATING THORACIC WOUND.

ON the 26th December, 1873, Mary D——, æt. 14, presented herself among the extern surgical patients for treatment. She stated that on Christmas eve, her sister and herself were seated over the fire, when a quarrel ensued about some money matters, the result of which was that the sister seized a red-hot poker, which happened to

be in the fire at the time, and drove it right through the clothes and skin of the other sister, before the latter had been sufficiently forewarned to repel the unexpected thrust. She wore the same dress and inner garment as on the night the injury occurred, and on looking through the hole caused by the burn, the inflamed edges of the wound, and the hollow depression, which seemed full of a muco-purulent secretion, could be distinctly observed. She was in an extremely debilitated condition; her teeth chattering with the cold; her cheeks pale and blanched; her eyes suffused with tears; her breathing hurried, painful, and laborious, and her circulation exceedingly rapid. She was removed immediately to one of the Wards, where the ordinary measures to restore the animal heat were resorted to, and the wound then submitted to exploration.

It was situated at the right side of the sternum, between the fifth and sixth ribs, was oval in form, and about half an inch in diameter. The edges of the wound were very much inflamed, and its interior was filled up with a pale, frothy-looking fluid, which was regularly pumped out by each expiratory movement.

Inspiration was attended by a peculiar sort of wheeze, somewhat like the sound given by leaves agitated by the wind, and air bubbles were distinctly forcing themselves from the wound.

By clearing away the secretion with a sponge, a better view of the extent of the injury was revealed, and the conclusion arrived at was that the pleura had been burned away, the surface of the lung wounded, and that both pleura firmly adhered together. Curiosity would have prompted further research, but, seeing Nature had already begun the reparative process, closer examination would have only tended to make things much worse than they were. The abdominal muscles were working powerfully to compensate for the feebleness of the powers of aeration, and even after being such a short time in bed, her whole body was bathed in perspiration, showing the efforts of nature to relieve the internal organs.

Accordingly, the edges of the wound were approximated as closely as possible by slips of adhesive plaster, space being left for the mucus to escape, and the surface being covered with chloralum wool to absorb the discharge. A bandage was then bound lightly round the chest over the wound. Six leeches were immediately ordered to be scattered near the sternal notch, and the following powders were ordered to be given every four hours :—

℞.—Pulv. ipecac. co.,
Nit. potass., āā gr v.

Fiat pulv.

Brandy and egg mixture and beef tea were also prescribed.

Next morning the patient was considerably improved. Pulse 105; resp. 30; temp. 100°·6; skin moist; breathing quiet; cough troublesome; sputa white and ropy. Examination of the chest revealed no dulness on percussion, or abnormal clearness. At the affected side the vesicular murmur was not very distinct, and the breathing at the left side was puerile, but no crepitation could be heard, though the right side appeared somewhat bulged out.

The diaphoretic treatment was kept up till partial hepatization ensued from the exudation of plastic material.

In ten days from the date of admission contraction and cicatrization followed, and the patient left Hospital without suffering from chest symptoms of any kind, or having her general health at all impaired by the injury.

Remarks.—In some clinical observations on this case Dr. Shinkwin dwelt particularly on an over-officious examination of a penetrating wound of the thorax. Putting the gratification of mere curiosity out of the question, what else is to be gained by exploration with the finger, or probe, or by the injection of fluid into the wound to see whether it regurgitates immediately or lodges in the part? If called in early it may, of course, be ascertained if the wound has penetrated to the pleura, or if the pleura has been divided, and should blood be escaping it may be possible to name the very artery whence the hæmorrhage proceeds; but if called in late, it is highly probable that an examination will only interfere with the reparative process already begun by nature; driving the finger, or probe, through the adherent pleura, disturbing the process of granulation, bringing on fresh hæmorrhage, and laying the foundation of emphysema, pneumothorax, or some other dangerous complication. Besides, deep wounds of the thorax are attended by a train of symptoms rarely, if ever, found to exist in the case of superficial wounds, and Dr. Shinkwin was of opinion that the presence of any one of these symptoms justified the surgeon in having recourse to bleeding and other antiphlogistic means, for the purpose of preventing inflammation of the pleura or lungs, and the usual fatal consequences therefrom. He believed that the rapid adherence of the pleura in this case, brought about by nature, had prevented all chest complications; but that beyond doubt the lung itself had been wounded, as proved by the escape of air bubbles. In all instances where symptoms readily detected by the eye led to the conclusion that the wound was penetrating, he recommended bleeding as a preliminary step; going upon the broad principle that in such a case it is far better to bleed the patient, than to put him to useless pain with the probe, and waste opportunities of doing good, which too frequently can never be recalled.

Original Communications.

DR. CHARPENTIER ON PLACENTA PRÆVIA.

By A. V. MACAN, M.B., M.Ch., Dubl.;
Assistant Physician Rotunda Hospital.

In the *Archives de Tocologie* for 1874 will be found a series of papers on puerperal hæmorrhages by Dr. Charpentier. Of these the most interesting are those on placenta prævia, both on account of the importance of this complication, and also, because the treatment adopted by the author differs considerably from that recommended by some of the most recent English authorities on the subject.

We regret that want of space prevents us giving more than a short abstract of some of the more important points dwelt on by Dr. Charpentier.

It was not till the year 1685 that the fact of the placenta being inserted over the os was discovered by Portal. Before his time the presentation of the placenta at the os at the commencement of labour, was thought to be due to its becoming detached from its insertion at the fundus, and subsequently sliding down so as to cover the os. From the time of Portal up to the present, many explanations have been given to account for its abnormal insertion. That adopted by Schröder, one of the latest writers on obstetrics, is, that it is caused by enlargement of the cavity of the uterus, accompanied by an unnaturally smooth condition of its mucous membrane. This would, he thinks, account for its more frequent occurrence in multiparæ, in whom the cavity of the uterus is enlarged and the rugæ of the mucous membrane often obliterated by previous leucorrhœa.

Authors are as yet not quite agreed as to the cause of the hæmorrhage which so frequently appears at the seventh month, and recurs at intervals up to the time of labour. The old explanation of this was, that it was caused by the taking up of the cervix. M. Holz has, however, shown that the cervix remains intact up to within a few weeks, in some cases even till within a few days, of full time. This theory also fails to account for its occurring, as it often does, when the os is quite closed. The most recent explanation is, that during the latter months of pregnancy the lower segment of the uterus, in addition to its increased growth, is subjected to a mechanical distension with which the growth of the placenta cannot keep pace. Hence you have partial separation and consequent hæmorrhage. Once labour sets in, the hæmorrhage is of course caused by the dilatation of the os.

How, then, can we account for the fact that in some rare cases there is no hæmorrhage at the time of labour? Simpson explained it by saying that the hæmorrhage came from the placenta, and that if the placenta was wholly detached the hæmorrhage must cease. The now well-known explanation of Dr. Robert Barnes is, that when all that portion of the placenta which is attached to the "cervical zone" has become detached, the hæmorrhage will at once cease, provided there is uterine action. For when this has taken place there is no necessity for any more of the placenta to become detached to allow the child to pass, and there is therefore no fresh hæmorrhage. While at the same time the vessels already laid open by the detachment of the placenta are closed by the expansion or shrinking of the os. We regret that in noticing this theory the author has thought fit to accuse Dr. Barnes of having borrowed it from M. Legroux. The following facts may tend to put the matter in its true light. Dr. Barnes first published this theory in the *Lancet* as long ago as the year 1847, it was the subject of his Lettsomian Lectures in the year 1857, and was well known in England before the publication of his book on "Obstetric Operations," in 1871. M. Legroux first published his views in the *Archives de Médecine* for 1865.

If attention be paid to the following points, the diagnosis can be made without much difficulty. First, the time at which the hæmorrhage first makes its appearance, viz., from the seventh to the eighth month, in some rare cases as early as the sixth month; the fact that it comes on suddenly, without any known cause, and stops as suddenly; and that it reappears at uncertain intervals, but in increasing quantities, up to the time of labour. Second, the absence of ballottement, the thick mass of the placenta being interposed between the finger and the fœtal presentation. Gendrin has even noticed a pulsation through the cervix not synchronous with the maternal pulse. Dr. Charpentier thinks that M. Depaul has shown conclusively that we cannot place the least dependence on auscultation as an aid to diagnosis.

Naeglé was of opinion that the less complete the presentation of the placenta, the more advanced the pregnancy would be before the hæmorrhage appeared, and that in cases where only a small portion of the placenta presents with its margin at the os, there may be no sign of hæmorrhage till labour sets in. The hæmorrhage in cases of placenta prævia is always external; it takes place during the uterine diastole, but is expelled during the systole, and if the latter were continuous it could hardly take place at all.

The fœtal mortality increases according as the placental presentation is more or less complete, the average mortality being about 3 in 5. The maternal mortality given by the older obstetricians was as high as 1 in 3. Dr. Charpentier thinks that an experienced practitioner can almost always save the life of his patient.

The question of treatment is considered at great length. But in mentioning the different

plans of treatment that have been proposed, the author confounds in a curious manner that recommended in some cases by Sir J. Y. Simpson, with that proposed by Dr. Robert Barnes. Thus at p. 420 he says these methods are "artificial delivery, ergot, the plug, rupture of the membranes, and the plan recommended by Simpson, Barnes, and the English, of detaching the placenta and extracting it before the birth of the child."

The first, or artificial delivery, is a most dangerous method only suited to most urgent cases. The rupture of the membranes is very good treatment, provided the os is partially dilated. It is hard to do when the presentation is complete. The use of ergot is a powerful auxiliary, but it increases greatly the danger to the child, and is contra-indicated in contraction of the pelvis, organic disease of the uterus, and mal-presentation.

The author looks upon the plug as the treatment *par excellence*. It requires to be applied skilfully to be of any great use. Charpie or tow are the best materials with which to plug, and if properly applied, the author considers such a plug superior to any description of India-rubber bag which can be introduced into the uterus and inflated. The great point to attend to when plugging is to introduce enough of the charpie or tow, as much as a pound and a half of the former material being sometimes necessary. The bladder and rectum should both be emptied before we proceed to plug. Some practitioners dip the first pledget in a solution of perchloride of iron. This is not necessary.

The charpie should be rolled into small balls, the first 20 or 30 of which should have a piece of thread attached. Before being introduced they should be well covered with cerate. This renders a speculum unnecessary.

The author lays great stress on packing tightly the anterior and posterior cul de sac, but especially the latter. The success of the operation depends to a great extent on this being well done. The vagina itself should be filled with the small pledgets, until they appear externally. Then you apply a handful or more of dry charpie, and over that three or four compresses, the whole being fixed by a T bandage. If this plug be well applied there can be no hæmorrhage. If the charpie at the vulva become moist it is a proof that the plug is badly applied, and it should be removed at once and reapplied. To be of much service the plug should be left in from 12 to 24 hours.

The author then examines the following objections that have been brought against the plug:

1st. That it only changes external hæmorrhage into internal.

2nd. That it tends to bring on premature labour.

3rd. That its application as well as its presence in the vagina is very painful, and prevents the rectum and bladder being emptied.

As to the first: if the membranes are still unruptured and the plug properly applied, internal hæmorrhage is impossible. If the membranes are ruptured, the chance of internal hæmorrhage is increased, and we must apply a bandage to the abdomen, and be ready, should the uterus increase in size, at once to remove the plug, and finish the labour by other means. The second is of no great weight, for the hæmorrhage generally takes place after the child is viable, and in any case we have no choice. The third can be obviated by passing a catheter, and seeing that the rectum is empty, before applying the plug.

Dr. Charpentier urges many objections against the plan proposed by M. Pajot, and practised extensively of late by M. Bailly, viz., of leaving the plug *in situ* till it is expelled by the uterine effort, pressing it back again into the vagina with the hand, during the intervals between the pains. The most serious of these is, the great fœtal mortality, which even the defenders of this plan acknowledge it entails. Again, it is not applicable in cases of mal-presentation, which are common, and it requires powerful uterine action, which is rare, in cases of placenta prævia.

If, on removing the plug at the end of twenty-four hours, it is found that there is no uterine action and that the hæmorrhage has ceased, we need not re-introduce it. If there is uterine action, and the os is still very small, we should again introduce it, but not allow it to remain so long as before, at the same time giving small doses of ergot. At the end of from eight to twelve hours, we should again remove it, and proceed to puncture the membranes, provided the hæmorrhage is but slight; if, on the contrary, it is still considerable, we must again introduce the plug, and wait till the os is sufficiently dilated to allow of operative interference.

This may be either manual or instrumental, the choice being determined by the usual conditions, such as presentation, prolapse of the cord, &c., &c. Dr. Charpentier does not look with much favour on plugging by means of India-rubber dilators.

The author then briefly reviews the method first proposed by Radford, and usually known as Simpson's method, evidently under the impression that the latter advised its being carried out in every case of placenta prævia. He, of course, condemns it. He then notices the method proposed by Cohen for converting a complete presentation into a partial one, by detaching the smaller segment of the placenta from its uterine attachment, rupturing the membranes freely along the edge of the detached portion, and allowing it to hang down into the vagina, and thus no longer cause any obstruction to the delivery.

Lastly, the author gives a short statement of Dr. R. Barnes' treatment (showing that he knows it is not the same as Simpson's), but does not further criticise it.

Original Lectures.

ON EPIDEMIC SCARLATINA.

By WILLIAM MOORE, M.D., The "King's" Professor Practice of Medicine; Professor of Clinical Medicine and Physician to Sir P. Dun's Hospital and to the Institution for Diseases of Children, Etc.

CASES OF SCARLATINA ANGINOSA—MALIGNA—"GLOSSITIS" COMPLICATING SCARLATINA—TREATMENT.

GENTLEMEN—It occurred to me that there is a subject of immediate and great practical importance which I should not pass over in this present course of lectures. I refer to the presence amongst us of epidemic scarlatina. We have had now scarlatina epidemic amongst us I may say for the last year. It was particularly fatal in the months of September, October, November, and December, and though it abated somewhat in the months of January and February, my own experience would tell me that in all probability we shall have another burst, or a revival of this exanthem in the month of March, because of all the months in the year I believe March is the most obnoxious, if I may use the expression, to scarlatina. I do not intend to take up your time with the hygiene or the etiology of this disease, but I propose bringing before you some typical cases of the present epidemic. I leave what may be called the simple cases of scarlatina, many of which are so benign that without treatment, and with common caution on the part of these patients with regard to avoiding cold, they will get well without complications of any kind. I exclude that type altogether, and take you to the more severe forms of scarlatina, which are called the *Anginose* and *malignant*.

I will first take a typical case of the "Anginose" form of the disease.

Margaret B——, aged 12 years, was seized on the 18th November last with shivering, headache, pains in the back, suffusion of the eyes and sore throat, and on the 19th was admitted into Sir Patrick Dun's Hospital. On admission her face, neck, and arms were covered with an eruption which she said came out on the previous day, and which was of a deep purple colour. Her throat was red and swollen, and her tongue thickly furred. Her pulse on admission was 160, and her temp. 105°·2 Fahr. Now these are the most important points for you to attend to, the quickness of the pulse and the height of the temperature. On visiting her the following day I found that she had been very delirious during the night: her respiration was hurried, and she complained of difficulty in swallowing; the eyes were very suffused, and there was sordes on the teeth. I recommended hot water inhalations to be used continuously, and she was ordered five grains of chlorate of potash three times a day. On the second day of her admission her pulse was 130 in the morning, with a temp. of 104°·7. On the following day, the third, I found that she had been very delirious during the night, and that she had vomited. The eruption was now all over her body, of a livid colour; her tongue was red and dry, pupils dilated, pulse 150, temp. 105°·7. The inhalations and the chlorate of potash were continued, and she was getting as much beef tea and milk as we could induce her to take. On the following day she was so restless and violently delirious that she had to be held in bed. The eruption was still of a livid hue; her pulse was 140, and her temp. 103°. On account of the sleeplessness she was ordered eight grains of bromide of potassium to be taken at bedtime. On the following day I found that she had been very delirious during the night, and constantly trying to get out of bed. She would not protrude her tongue. The eruption was disappearing from the upper extremities, and was losing its livid colour somewhat. Her pulse was 120, and temp. 102°·6. The bromide of potassium was repeated at bedtime. The following day I found that she had slept well, and that there had been less delirium during the night; the tongue was brown and dry, and the eruption fading, but the left parotid gland was very much swollen: her pulse was 140, and her temp. 104°·3.

The next day, the 25th November, she had slept well, and there was no delirium; the parotid and submaxillary glands were very much enlarged; her pulse was 140, and temp. 102°·8 in the morning, her evening temp. being 104°·6. On the 26th November the report was that she had slept well, that there was no delirium, and that all the symptoms were improved, but she complained of pains in her bones and pain over the submaxillary glands. Her neck felt brawny and was generally enlarged, and there was a sanious discharge from the nose. Her pulse was 136, and morning temperature 102°·3. On the 27th November, the eighth day after admission, she had slept well, but was again slightly delirious. In the morning her pulse was 150, and temp. 102°·8; and in the evening her temp. was 104°·1. She was now ordered one ounce of brandy, to be taken in milk during the twenty-four hours, with beef tea *ad libitum*. On the 28th I found that there had been some delirium—a quiet kind of passive delirium—during the night: her pulse was 128, and her evening temp. 105°·1. The brandy and general treatment were continued. On the 30th November I increased the brandy to two ounces, and on the 2nd December, in addition to the two ounces of brandy,

she got ten drops of the syrup of iodide of iron three times a day. Matter formed in the left submaxillary space, which was opened by Dr. Bennett on the 5th December. The same treatment was continued, and on the 11th December her temp. was normal, and did not again rise above 98°·8 during her stay in Hospital, which she left on the 19th December, having made a complete recovery.

Now this case is an example of Scarlatina "Anginosa." It is a type of a very severe form of scarlatina. Let us just look at the symptoms that occurred. In the first place, the temp. at the end of twenty-four hours was 105°. Now a temp. of 105° at the start of any fever is of very serious import: it is a very unfavourable omen. In this case we had a temp. of 105° and a pulse of 160 at the end of twenty-four hours. Now I maintain that there is no disease that we know of in which you could have within the same time such a range of pulse and temperature. Hence it is that in a great many obscure cases of scarlatina, where you have an ill-defined eruption, and where doubt exists whether scarlatina is present or not, if you have such a sudden accession of temp. and pulse as I have shown you, even in the absence of eruption, I believe you would be generally right in pronouncing the case to be scarlatina; for I know of no disease that within the same time will run the pulse and the temp. up in this sudden way. You have no such analogous rise of pulse and temp. in continued fevers. The temp. and pulse does not run up to such an height in typhoid fever within twenty-four hours; on the contrary, we look on a case of typhoid fever, with a temp. of 105° Fahr. at the end of the first week, as very high and ominous of mischief, and I need not tell you that in typhus we do not expect a temp. of 105° before the fifth or sixth day, and even then it would portend an extremely bad case. In fact, a temp. of 105° at any time in typhus would mean a very heavy case. These two clinical facts, the sudden running up of the pulse and temp. taken together where a doubt might arise, during the prevalence of scarlatina, would, even in the absence of eruption, justify you in saying that it was a case of latent scarlatina.

In this case we had also at the end of twenty-four hours, sordes on the teeth. The remark which I made at the time about the sordes on the teeth, as some of you will no doubt remember, was:—"Gentlemen, this will be a very severe case of scarlatina." It would not have surprised me to have seen sordes about the third, or fourth, or fifth day; but with such a temp. and pulse, and sordes at the end of twenty-four hours, it was pronounced a most severe case, as it eventually turned out. Whenever you have such an early high temp. and so quick a pulse, and the objective sign of sordes, you will correlatively have another symptom, the value of which over and over again I have pointed out to you in connection with long and short fevers, viz., delirium. You cannot attach too much value to the symptom of delirium; and to understand its clinical value you must weigh well the different degrees of delirium. The delirium in this case was of a very active kind. She was a young girl, 12 years of age, extremely florid, and her delirium was so active that a nurse was told off to keep her in bed, and eventually we had to use mild restraint by tightening the sheets. There is one other kind of delirium in scarlatina, in which there is a low muttering from the start, of which I will give you a typical case. From the very first night after the accession of the fever this girl became delirious, and the delirium went on increasing till the fourth day.

Now if a patient in fever gets delirium, whether it is active delirium, or delirium of a more passive kind, either in typhus or enteric fever, within forty-eight hours, what would be your prognosis of such a case? The end of that case would probably be, that about the time the scarlatina would be "defervescing," the "typhus" would be comatose. That is something like the clinical value which attaches to delirium, occurring early in continued fevers. If you found a patient in typhus fever delirious on the second day, I fear in spite of all your stimulation and support, the case would prove fatal. Nor do we meet with such very early active or violent delirium in typhoid fever, but if it did occur, its prognosis would be equally unfavourable. But here was a girl with the most active delirium, and yet we did not shave the head, or put ice to her forehead, or use either antiphlogistic or stimulant remedies. We let the delirium alone; and why? Because we were aware that this girl's fever was a short fever; we knew that the high temperature and small pulse, and all the co-relations of fever in this disease, generally abate about the fourth or fifth day. If this girl had to go through a continued fever of twelve or fourteen days, with such a high temperature, and signs of such combustion at the start, we would have treated it very differently. But we took the delirium for what it was worth, and gave no stimulant, but plenty of beef tea and milk diet. The case went on as you saw, and the delirium left her for a time; but then there was a secondary kind of delirium about the eighth day. Now what is the meaning of the returning delirium? The eruption had disappeared, and though her tonsils were very much enlarged, and there was general cervical glandular enlargement, the temperature was coming down, and she seemed on the high road to convalescence, when she got delirium again on the eighth day. This delirium was associated with swelling of the parotid and submaxillary

glands. This was a different kind of delirium from the first. It was what we call a passive form of delirium. If you ask me what I consider its clinical character, I answer that I regard it as a pyæmic symptom which you will see coming on about the eighth, ninth, or tenth day in scarlatina. The moment this delirium ensued we at once gave the patient stimulants, commencing with one ounce of brandy, and increasing it to two ounces in the twenty-four hours, with as much beef tea, milk, and nutriment as we could get her to swallow; and when I found this glandular enlargement still extending, ten drop doses of syrup of the iodide of iron were added every third hour. By this treatment the girl, so to speak, battled through the disease, till matter formed, and was given vent to in the submaxillary space, and she recovered.

I have dwelt on the treatment of this case, which was one of very considerable severity, and I may tell you that these buboes in the neck in scarlatina are frequently attended with fatal results; but take care lest the fatality of these cases has been added to by what may be called lowering and antiphlogistic remedies. Be that as it may, my advice to you would be, whenever you see a case of scarlatina with submaxillary and cervical glandular enlargement, coming in with secondary fever about the eighth, ninth, or tenth day, let your treatment be stimulant and generous.

Now this case is a type of what may be called the scarlatina "anginosa." It is a severe form of the disease, but there is a much more severe and fatal one. There is a type called scarlatina "maligna," which is ushered in in this wise. It seems as if the poison, so to speak, seized upon the patient, that he or she was so completely overwhelmed by it, that death ensues frequently within thirty-six or forty-eight hours. I will give you a type of this form of scarlatina. A girl, called Kate D——, was seized on the evening of the 3rd December last, with shivering, headache, and sore throat. She was brought to Sir Patrick Dun's Hospital on the morning of the 5th. She was the fourth member of her family that caught scarlatina, the other three having died at home. After admission, when conscious, she complained of nothing but headache and great thirst. There was delirium of a low type. She had no evidence of any tonsilitic enlargement of any kind. She was in a most restless, agitated state, with subsultus twitchings about the angles of the mouth; her face was bluish, and faintly mottled. She kept picking at the bed clothes, and was sleepless. She could scarcely be got to give an answer to a question, or to protrude her tongue, which was dry and black; her teeth and lips were covered with sordes, and she was suffering from diarrhœa, of which she gave no warning. Now, it would be impossible to meet with more grave symptoms than these. On admission she got wine liberally; her pulse was then 140, and temp. 101°·9. The following morning, 6th December, I found that she had dozed at intervals during the night, but was very delirious; and all the other symptoms more aggravated. Her delirium was of a low muttering character. The eruption was out on the lower extremities, but of a very livid colour. Her pulse was 150 this morning, and her temp. had fallen to 96°·6. She was ordered fifteen minim doses of tincture of perchloride of iron, to be taken every third hour; a tablespoonful of brandy every second hour, day and night, with as much milk, and rice milk, as she could be induced to take. On the following morning, the 7th December, I found she had been still very restless and delirious during the night, and that she had not slept. Her pulse was 130, and her temp. 100°·2. On account of the sleeplessness she was ordered twenty grains of chloral at bedtime; the iron and brandy to be continued as before. On the 8th December, she was still delirious, and constantly trying to get out of bed. Her pulse was 100, and temp. 98°·3. The brandy and the iron mixture were continued in the same doses, and she was ordered twenty grains of bromide of potassium, instead of the chloral hydrate at bedtime. On the 9th, she had slept more quietly, with almost no delirium, but had vomited freely. Her pulse was now down to 90, and temp. to 97°, and for the first time she had given warning, when she wanted the nurse. The brandy and the iron mixture were continued. On the 10th December she had slept well, with no delirium, and was very much better. The iron mixture was continued, but the brandy was reduced to half ounce doses every fourth hour. From that time this patient did well, and she left the Hospital with a normal pulse and temperature on the 15th December.

Now the symptoms in this case were typical of what we call the scarlatina "*maligna*." You see that the delirium differed from the delirium in the previous case in being of a low, asthenic type; and hence from the very start, I may say, I at once put this girl on the most stimulating plan of treatment I could devise, and a treatment which you will see the value of, the more you employ it in these low, typhoid, exanthematous cases, viz., the old-fashioned muriate tincture of iron, which she got in fifteen drop doses every third hour, day and night, with half an ounce of brandy every second hour, day and night.

This girl had a symptom which was not present in the other case. In addition to her delirium, she had abortive convulsions. I do not mean to say that she threw herself about, or bit her tongue, but she had suppressed convulsions,

evidenced by twitchings about the angles of the mouth and muscles of the face, and subsultus. Whenever you see symptoms of convulsions ushering in scarlatina, "you may look out" for the worst. It is a most grave symptom when ushering in scarlatina, especially when superadded to the other symptoms I have mentioned; but you may have convulsions at another period of your scarlatina, and though the ushering in of this fever with convulsions is of serious moment, *cæteris paribus*, in my mind it is not so serious as the accession of convulsions in the secondary stages of scarlatina, when it is generally associated with anasarca and uræmia. Again, in this case, we had vomiting, sleeplessness, and diarrhœa. In fact, all the gravest symptoms occurring early.

I have cited those two cases as typical of the more severe form of the disease. The latter type of the disease is one that almost invariably proves fatal. In connection with the treatment which you see I have adopted in those cases, I may say that wherever I see grave symptoms, I adopt the stimulant and chalybeate treatment I have mentioned; and in proof of its therapeutical value, I will adduce some other cases. In consultation with Dr. Edward White of this city, about six weeks ago, I saw three children, members of the same family, in scarlatina. The first was a boy between three and four years of age; he had been about seven or eight days in scarlatina when I saw him; he was delirious, and screaming, and had a sanious discharge from his nose, an offensive discharge from both ears, and great submaxillary and cervical glandular enlargement. The treatment adopted was five minims of the muriate tincture of iron every third hour, with an ounce of brandy in a pint of milk, and beef tea as much as he could be got to swallow.

This case, which was a type of the scarlatinal bubo, the entire neck giving a brawny sensation to the hand—recovered. The next was a girl about five years of age, and she got the typical sore throat of scarlatina, which I may tell you is a bluish condition of the fauces and arches of the palate, and an œdematous condition of the uvula, with a kind of creamy white epithelial exudation, in patches over the tonsils and fauces. It is not of a diphtheritic character, nor of a yellowish sloughy colour, but is a whitish, creamy, non-tenacious exudation. This girl had the eruption well out with this condition of throat. We were not uneasy about her till about the eighth day, when her temperature got up, and she got scarlatinal rheumatism. She suffered from severe pains in her shoulder, elbows, and wrist joints. We at once put her on iron and brandy, and the case did well. The next member of the family was a girl about ten years of age. She had a sanious discharge from the nose and ears, and buboes in the neck. She was treated on identically the same plan, viz., with eight minim doses of muriate tincture of iron every third hour, a teaspoonful of brandy and milk every second hour, and though the case was very protracted, eventually matter pointed in the neck, and she recovered.

I mention these cases with their salient symptoms, especially the buboes in the neck, as typical of the value of the stimulant and iron treatment in cases with pyæmic symptoms—a mode of treatment which I fear is not sufficiently often steadily carried out.

I will now adduce to you another case, in which there was a complication, viz., *glossitis*, which I saw for the first time in scarlatina. A gentleman in this city, aged about 18 years, sent for me, complaining of rigors, chilliness, and pains in his bones. I suspected scarlatina, and on examination, I found faint eruption on his lower extremities; desquamation ensued in due course. On the eighth day, slight enlargement of the submaxillary glands took place, the tongue being morbidly red. On the morning of the ninth day, when I entered his room, I was struck with a peculiar smell, and on looking at my patient, found him with his tongue protruding from his mouth; he could not close his mouth, or keep in his tongue. His speech was quite unintelligible from the size of his tongue, and he could not swallow, and within twenty-four hours this acute glossitis had set up, and he had been delirious during the night. I at once made a free incision along the dorsum of the tongue, and promoted the bleeding with hot-water gargles, afterwards employing gargles of chlorate of potash, and put him on fifteen minim doses of the muriate tincture of iron every third hour, and a tablespoonful of brandy and milk every second hour, night and day. The scarification was attended with complete success. I saw him in the afternoon of the same day, when he was able to speak intelligibly, and keep in his tongue; in due time, the glandular enlargement disappeared, and the case did well.

I cite this case for two reasons, firstly, the occurrence of such an unusual and abnormal complication as "glossitis" in scarlatina. I saw in Sir Patrick Dun's Hospital, about three years ago, a case of glossitis occurring during typhoid fever, but with that exception and the present instance, I cannot recall another case of glossitis occurring in connection with any exanthematous disease. Dr. Collins(1) has recorded a case of scarlatina, the only one I can lay my hands on, which was under the care of Dr. Banks some years ago in Sir P. Dun's Hospital, in which glossitis set up about the ninth or tenth day. Recovery in this case followed free scarifications of the tongue; and it also still further

(1) *Vide* IRISH HOSPITAL GAZETTE, Vol. I., p. 343.

confirms the value which attaches, in my opinion, to this chalybeate and stimulant treatment, in what may be called the secondary or pyæmic fever of scarlatina.

Progress of the Medical Sciences.

REPORT IN DERMATOLOGY.

By WALTER G. SMITH, M.D., Dubl.;
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PARASITIC DISEASES.

Eczema marginatum, with Onychomycosis (Parasitic Sycosis).

In a recent number of the *Wiener Mediz. Presse*, Dr. I. Neumann reports two interesting cases of parasitic skin affections. In the first case, the upper half of the inner surface of both thighs, and the abdomen from the umbilicus downwards, were covered with a very infiltrated eczema marginatum, whose borders were skirted by a number of papules and vesicles arranged in semicircles, and there were similar patches on the cheeks and arms. The finger nails were uneven, brittle, and of an unhealthy yellowish colour, and, on microscopic examination, chains of jointed mycelium were found in their substance, running amongst the epithelial cells. This patient appears to have been infected with the fungus from a horse which he had ridden for many years, and which had a diseased skin. This combination of affections has not been previously noticed by any observer.

The second case is one of sycosis. The hairy parts of the patient's cheeks, chin, and neck were covered with patches from the size of a three-penny piece to that of a half crown, partly circular and partly of a semicircular shape, whose centres were covered with dirty yellowish scales, which could be easily removed, while there were small vesicles and crusts at their edges. There were also pustules here and there, each penetrated by a hair, while on the chin there were a number of tough, reddish tubercles as large as a pea, surmounted by yellowish brown crusts. The hairs could easily be extracted, and, under the microscope, chains of mycelium were found running through them, while round and oblong spores, both isolated and in groups, were imbedded in their root sheaths. This is the first case of parasitic sycosis which Neumann has met with in Vienna.—(*Med. Times and Gaz.*, Jan. 9th, 1875).

[In the last edition (1873) of his *Lehrbuch der Hautkrankheiten*, p. 544, Neumann figures a hair laden with fungus conidia which Dr. Duhring had sent him from a case of sycosis in the St. Louis Hospital. But he states that in Vienna parasitic sycosis rarely occurs, and that notwithstanding the abundant material which comes before him, he has seen this disease only three times. In each case he was able to show that it was conveyed, once from a dog, and again from a horse which laboured under Herpes (Tinea) tonsurans. Neumann concludes that "sykosis parasitaria," is identical with Herpes (Tinea) tonsurans, p. 545.—W.G.S.]

Onychomycosis.—A soldier, aged 22, consulted Dr. Hiller, of Minden, in 1874, for a peculiar affection of the fingers, apparently similar to an attack from which he suffered in the preceding year. The man habitually kept his hands and nails extremely dirty, and when he came under observation, presented these appearances. The disease commenced as a small, black, painful spot under the nail of the left thumb, near its free border. This was followed in a few days by redness and swelling of the whole ungual phalanx, attended with shivering and malaise. The other fingers exhibited a blackish indelible areola near the free ends of the nails, which were also slightly flattened. The epidermis of the second phalanx of the thumb and the nail itself were elevated by a collection of fluid. Puncture of the sac gave issue to about four grammes of a yellowish turbid serosity, containing numerous white flocks. Under the microscope several structures were observed in the liquid; cells of the Malpighian layer arranged in stratified laminæ, and traversed by a branched mycelium with large meshes, but showing no evidence of transverse segmentation. Here and there were found large spherical sporangia, filled with a granular protoplasm, and a multitude of spores; lastly, young cells of the rete mucosum, with some blood and lymph corpuscles. The mycelium and the organs of fructification evidently belonged to *mucor mucedo*, a fungus which developes upon stable manure. The dark sub-ungual areolæ of the other fingers were composed in great part of the same vegetable elements. The root of the nail, and afterwards the palmar surface of the phalanx, became the seat of phlyctenæ, the liquid of which included similar parasites, although less abundantly; and finally the nail fell off. Subcutaneous injection of the fluid into rabbits produced no effect.

Hoffmann (*Virch. Archiv.* XLIV. 2, 3.—*Bot. Zeitung*, XXV.) had previously met with an analogous parasitic affection, to which the fish in the Botanic Garden at Giessen succumbed. He found in the skin and muscles of these fish a considerable quantity of *saprolegna* and *mucor mucedo*, and the inoculations which he practised left no doubt as to the deleterious action of these fungi. (*Revue des Sci. Méd.*, 1875, p. 207; from *Berlin. Klin. Wochensch*, 1874).

Tinea Tonsurans.—On the treatment of this most obstinate and disheartening affection—chronic ringworm—Dr. Dyce Duckworth offers the following remarks:—

"The hair should be cut very short all over the head. Twice, or once at least, daily the head should be well lathered with petroleum soap (Hendrie's, I believe, is the best), and rinsed with hot water. When dry, each infected patch should be sponged with the following lotion: acetic acid (Ph. B.) one part, rose water 10 parts. The remainder of the head to be anointed with simple oil or thin pomade. Epilation I have ceased to practice, not having found any benefit from it, but, on the contrary, an excessive tenderness and irritability of the parts. It is impossible to withdraw affected hairs entire from their follicles, and the pain and misery the process of plucking entails to the young patients is certainly to be avoided if possible . . . . . Nothing is more harmful in this stage of the disorder than over stimulant treatment." (Reprint from *St. Barth. Hosp. Rep.*, Vol. X., 1874).

Dr. Gee recommends the following method:—1. Cut the hair close; 2. Wash the scalp with warm water and soap twice a day; 3. Rub well in this lotion—Sulphocyanide of potassium, ℥ss; glycerine, ℥i; water, ℥vij; 4. Keep the lotion on night and day. (*Lancet*, Feb. 28th, 1874).

Scabies, Treatment of.—Dr. Weinberg recommends the following preparation:—

Liquid storax Flowers of sulphur Chalk	ää. 16 parts.
Green soap Lard	ää. 32 parts.

This ointment has a greeniah-yellow colour, a soft consistence, and a rather agreeable odour. The patient may apply this ointment before going to bed, taking especial care to rub it briskly into the parts in which acari are usually found. The application is to be renewed on two successive nights, and after three days a bath should be taken. For infants at the breast the ointment should be diluted with an equal quantity of

simple ointment. (*Ann. de Dermat. et de Syphiligr.*, VI. No. 2; from *Wiener Mediz. Wochenschr.*)

HERPES.

Herpes Gestationis.—Under this title, adopted from Mr. Milton, Dr. Duncan Bulkley, New York, describes a rare affection of the skin, peculiar to pregnancy, and which differs materially from the forms of vesicular disease commonly recognized.

Dr. Bulkley details in full the clinical history of one case which came under his own observation in 1873, and he has been able to find but eight other cases at all similar, which he quotes in his paper, and abstracts in a synoptical table. The cases are recorded by Gibert, Chausit, Hardy, Wilson (two cases), Milton, Klein, and Hebra, between the years 1840 and 1872.

In Dr. Bulkley's case, the principal features were these. A woman, aged 32, was confined with her first child in November, 1870. Two months previous to her delivery, a papulo-vesicular and bullous eruption began to appear, first and chiefly on the hands and feet, and subsequently involving to a greater or less degree all the rest of the body, except the head. This eruption, which Dr. Bulkley did not see, disappeared gradually towards the end of gestation, after having lasted two months. In about two and a half years she again became pregnant, having occasionally suffered from severe attacks of urticaria in the interval. When first seen by Dr. Bulkley in June, 1873, she was five months pregnant, and in fair general health. She had retroflection of the uterus. About two weeks previously, little groups of vesico-papules, preceded by irritation which provoked scratching, appeared on the feet and hands, and extended up the arms. The disease gradually gained ground, formed large crops of vesicles on the soles of the feet and palms of the hands, also around the nails and at the extremities of the toes, and caused unbearable burning and itching. The pruritus was relieved by an alkaline tar-wash. In a month the eruption had almost entirely faded away, and no recurrence took place until three days after delivery, when a few groups of minute vesicles came out on the extremities, but these soon passed away, and she regained health completely.

"The peculiar features of this remarkable disease, as gathered from the preceding clinical histories of nine almost precisely similar cases, recorded by eight observers during a period of twenty years, may be thus summed up:

1. There is an affection of the skin directly dependent upon the gravid state of the uterus, which may make its appearance at any period of gestation up to the seventh month, and generally continues until the organ is emptied of its contents, and has in a measure resumed its former state; this eruption is very apt, moreover, to recur at each successive conception.

2. The cutaneous manifestations are chiefly an intense irritation, consisting of burning, itching, or stinging, and sometimes pains, with the development of erythema, papules, vesicles, and bullæ up to the size of a hen's egg, the majority of the blebs, however, seldom surpassing in size a large bulla of herpes. These vesicles are commonly in groups, but do not follow any definite nerve-tracks, appearing first generally on the extremities and afterwards involving the larger part of the body. Exhaustion may ensue from the cutaneous irritation, but the disease is non-febrile.

3. The eruptive disease does not terminate at once after delivery, but slowly retrogrades, by the development of fewer and fewer vesicles at increased intervals, until the disposition thereto ceases entirely. An outburst of greater or less severity is most likely to happen on the third day; it is rare for any manifestations of the disease to remain a month after parturition.

4. This affection is sometimes accompanied or followed by other neurotic manifestations, as erythema, urticaria, and neuralgia, which may continue in the interval of conception, while in many instances the patient experiences perfect health in the *interim*.

5. This eruption has occasionally been the first indication that impregnation has taken place.

6. The majority of the cases have been uninfluenced by treatment, relief occurring only on the emptying of the uterus.

7. The children are not, as a rule, affected by the eruption in the mother, although in one case it was accompanied in two instances by a still-birth; here, however, the first eruption was followed by the delivery of a living child, whereas the second conception gave a still-born child without any maternal eruption."

Herpes Zoster.—In the *Dubl. Med. Journal*, October, 1874, Dr. John M'Crea gives the notes of three cases in illustration of the graver phenomena which may accompany herpes zoster. The first case is most to the point. A boy, aged 7, the subject for years of otorrhœa, and of occasional violent headaches, was attacked with ophthalmic herpes of the left side, which had been preceded for nearly two days by headache, vomiting, and intolerance of light. There were three patches of herpes—namely, one on the temple, one above the middle of the eyebrow, and one at the inner end of the eyebrow extending down the side of the nose. The conjunctiva was much injected, and there was copious purulent discharge from the left nostril, the right being quite normal. There was one distinct and well-formed pustule on the inner surface of the left cheek, opposite the upper molars. The headache and vomiting were less than at first, but there was considerable fever. Leeches were twice applied, and the eruption subsided in a few days. After the herpes had quite healed, there were left behind numerous scars and *dilatation of the pupil*. Dr. Kaposi has met with the following remarkable case of herpes zoster:—A nurse, aged 42, consulted him, 24th April, 1874, for a painful eruption which had appeared three days previously on the right hand. The affection was limited almost completely to the dorsal aspect of the forearm and hand, and was characterized by herpetic vesicles presenting in some situations a circinate grouping, and in others, forming regular tracks of one or two inches in length directed obliquely from the outer to the inner side of the arm. In some places the vesicles had given place to a blackish, well-defined eschar, representing exactly the form of the original group of vesicles, and completely surrounded by a rim of fresh vesicles. The last phalanx of the middle finger was affected with a sub-ungual whitlow, which had preceded the eruption by one day. There was pain in the whole of the upper extremity, and œdema of the forearm. Notwithstanding the progressive increase of the herpetic patches, their mode of grouping, and the difficulty of referring them to the path of a nerve, Kaposi did not hesitate to make the diagnosis of zona, in which he was confirmed by Hebra. On the 27th the eruption had dried up on the hand and forearm, but had extended with the same characters to the external surface of the arm and to the shoulder, and at the level of the first dorsal vertebra there were redness and swelling. Next day the scapular patches had dried up, and an irregular eschar, about twice the size of a florin, had formed at the level of the first dorsal vertebra and second rib. Groups of vesicles extended over to the supra-spinous fossa of the left scapula. In front, between the third and fifth ribs on the right side, near the nipple, some patches were observed, and on the day following, the eruption spread from this region to the sternal extremity of the left second rib. After the appearance of some irregular vesicular patches between the nipple and clavicle, the eruption terminated on the 2nd of May. The author draws attention to these two

points:—1. The peculiar and hitherto undescribed mode of peripheral increase of the herpetic groups, and the definitely circinate arrangement which the eruption exhibited during the first eight days. 2. The steady progress of the eruption from the periphery towards the centre, and its unusual extension beyond the median line. [In ordinary cases of intercostal herpes (shingles) it is not at all uncommon for the eruption to transgress the middle line in front by one or two inches. *Rep.*]—*Rev. des Sci. Méd.*, 1875. 1me fasc.; from *Wiener Med. Wochensch*: p. 545.

Dr. Bulkley reports a case of herpes zoster frontalis, attended with pain so severe as to interfere with sleep, in which prompt relief from the pain was obtained by the use of a continuous galvanic current from eight cells. The negative pole was placed indifferently on the back of the head, neck, and epigastrium, and the positive moist electrode over the seat of the eruption. On succeeding days, the current was gradually increased in strength up to sixteen cells.—*Archives of Dermatology*, 1st Oct., 1874.

LUPUS ERYTHEMATOSUS.

Dr. G. Thin had an opportunity of examining the skin of a man who died under Hebra's care in Vienna in 1873, in whom the disease had begun to show itself in the parts examined, viz., on the dorsum of the foot and toes, only a few weeks before death. He removed a portion of the skin from the inner surface of the second toe, beyond the area of the sebaceous glands. He found the sweat glands, the rete Malpighii, and the fibrillar tissue, perfectly normal in appearance. There was, however, enormous dilatation of the capillaries, which was most marked in the papillæ, and around the sweat glands, the contour of the dilated vessels being mostly indicated by the red blood corpuscles with which they were filled, but the vessels themselves were visible in some of the sections. The small veins were also distended by blood corpuscles. The fact that this condition of the capillaries was found in such an early stage of the disease, and before any other changes, and that it would, if persistent for any length of time, give rise to all the changes in the tissues described by other observers, led the author to doubt whether lupus erythematosus primarily affects the glands of the skin. The author stated his belief that, in the present defective state of our knowledge of the pathological anatomy of the disease, dilatation and distension of the capillaries is the earliest morbid condition which has been detected, and that this would correspond with stasis of the circulation during life. (Paper read at Royal Med-Chir. Soc.; abstract in *Lancet*, Jan. 16th, 1875).

Dr. Carl Friedländer has examined twelve cases of *lupus vulgaris*, and points out these differences between the tissue of lupus and the rete Malpighi:—The cells of lupus (1) are not prickle-cells; they (2) do not lie in close apposition; (3) they are not so dense or coarsely granular; and (4) there is a marked difference between the nuclei. (*Arch. of Dermat.*, Oct., 1874, from *Virchow's Archiv.* LX.)

BROMINE ERUPTIONS.

In addition to the rather common acniform eruption, Veiel, of Cannstadt, has observed erythema nodosum of the lower extremities, which continued, in some cases, so long as the potassic bromide was given, but disappeared as soon as its administration ceased. A diffuse and very painful erythema, accompanied by fever, and likewise confined to the lower extremities, was more frequently noticed.

Again, wheal-like elevations upon tender, erythematous portions of skin, were observed, which gradually broke down into deep, unhealthy ulcers, that showed no inclination to recovery so long as the bromide was given, but healed at once as soon as this was omitted, and left a scar of a dirty yellow colour. In another case, a great number of warts appeared upon many parts of the body, and most abundantly on the face. (*Boston Med. and Surg. Journ.*, Dec. 2nd, 1874, from *Vierteljahrsch. f. Derm. und Syph.*)

Changes in the Skin and its Appendages following Lesions of the Nervous Structures.—See an interesting paper by Dr. S. G. Webber, with three illustrative cases, in *Boston Med. and Surg. Journ.*, Dec. 17th, 1874.

Correspondence.

PARIS.

FROM OUR OWN CORRESPONDENT.

M. Dubrueil on Chronic Affections of the Organs of Locomotion.

Besides the regular didactic lessons given at the School of Medicine, supplementary lectures on the various branches of the Medical Sciences are delivered by Sub-Professors, who in this way prepare themselves for the higher office of Professor of the Faculty. M. Dubrueil, one of these Sub-Professors and Hospital Surgeon, has chosen for the subject of his course, "Chronic Affections of the Organs of Locomotion," and he began with "torticolis" or wry-neck. This affection is generally described to be a simple distortion of the head and neck; but this the lecturer stated is insufficient for the purposes of orthopædics, adding, that what constitutes wry-neck is not only the unnatural inclination of the head towards the chest, but this must be accompanied with rotation, so that while the head is drawn towards one shoulder the face is directed to the opposite shoulder. Before speaking of the different varieties of wry-neck, the lecturer described the normal anatomy of the parts which contribute to the completion of the deformity in question. Wry-neck may be either acute or chronic, according to the progress or duration of the disease, or it may be intermittent. But this division does not sufficiently indicate the nature of the affection, and M. Dubrueil therefore prefers the division founded on physiology and morbid anatomy, that is, on its etiology. This wry-neck may be divided into muscular and articular. Some authors have described an osseous variety, and give as an example Pott's disease. But this is manifestly incorrect, as this latter is a complicated affection, a disease of the spinal column, which it may affect in any other portion than the cervical region, in which case there would be simple inflexion, but no rotation, and consequently cannot be properly included under the above affection. There is also a cicatricial variety, which however does not belong to the domain of orthopædics. The muscular variety is defined to be due to a lesion of one of the muscles, which contribute to the drawing the head down towards either shoulder, or to rotating it, to a certain extent, such as the sterno-cleido-mastoideus, the trapezius, the splenius, the complexus, &c., though the most common form is that represented by the first-named muscle.

Sometimes the deformity may be produced by the simultaneous action of two muscles. This, however, is very rarely met with. Muscular wry-neck may be due either to contraction or to paralysis of the muscles concerned. Wry-neck produced by muscular contraction may be congenital or it may be acquired. The former is exceedingly rare, while the latter is sometimes the result of unskilled manœuvres during parturition. The causes of the acquired form may exist in the muscle itself, in the nervous system, whether central or peripheric, or in the blood vessels. The causes which produce the muscular variety are: myositis, rheumatism, and syphilis. Those of the nervous form are pro-

duced by convulsions, hysteria, and facial and cervical neuralgia.

M. Dubrueil then described the symptoms of wry-neck, which need not detain us. He next referred to the anatomical lesions, which may be summed up as follows: atrophy of the muscle contracted, affected at the same time with fatty degeneration, which is the result of inaction of the muscles whose functions are affected by some cause or another. Ligamentous contractions of the vertebral articulations, osseous deformities, though the spine itself is but slightly affected. This latter circumstance M. Dubrueil states is rather favourable to the prognosis, and would justify surgical interference. Lastly, as regards the blood vessels, a slight diminution in their calibre has been observed in those of the affected side. The diagnosis of this affection is generally easy. As for the prognosis, there is nothing serious. However, as the disease constitutes a deformity, this must be remedied by surgical means.

The treatment of wry-neck must of necessity depend upon its cause. This may consist of means which belong to medicine as well as to surgery. The principal of these are gymnastics, a system first introduced by Recamier, which consisted of forced but regular movements of the head, combined with shampooing. But this practice lost favour as being most painful to the patient. This was subsequently modified by an Italian, named Largui, who substituted gradual extension for the violent movements practised by Recamier, which was attended with as favourable results, with the advantage of making the patient suffer less. Electricity finds its utility here, which may be practised by two different currents, the intermittent or continuous, which, however, ought not to be employed indifferently. The intermittent current is applied to the antagonistic muscle, that is to say, the healthy muscle, and not to the contracted one, the object being to overcome the contracting force of the opposite side. The continuous current is applied to the affected muscle itself, but should these means fail, the surgeon must resort to more energetic measures, which consist of apparatus and tenotomy. The former are composed of simple bandages, mechanical apparatus, &c; but these in general are not of much use, as the affection which appears to be overcome during their application returns as bad as ever; besides which, the treatment by mechanical means is a tedious one, and in order to effect a radical cure, the surgeon is almost always obliged to have recourse to tenotomy. This operation was for the first time performed in Holland by Roonhuysen, but instead of dividing the tendon underneath the skin, as is now practised, the Dutch surgeon used to lay the latter open, either by the knife or by caustics, and then divide the tendon.

This practice has been very properly condemned, and to Dupuytren is accorded the honour of having modified the operation. This eminent Surgeon for the first time practised tenotomy in 1828, the result of which was very successful, and he then laid it down as an axiom that to obtain success there must be no suppuration, and the air must be entirely excluded from the wound. This, to this day, is the classical operation for this affection. From the anatomical relations of the parts in their normal condition one would feel disposed to look upon the operation as a most dangerous one, but if we consider the alterations that take place in the relative position of these parts, we shall find that the operation can be performed without any great risk, or the surgeon must be very awkward indeed to wound the great vessels that lie under the sterno-cleido-mastoideus, the muscle generally divided in this operation. When the muscle is divided the next step is to place the head in position. It may seem naive to say that the head should be inclined in the direction opposed to the lesion, but this cannot be said of the second step of the operation, that of rotation. At first sight one would suppose that the head should be turned in the reverse position it occupied, that is to say, supposing the lesion to be situated on the left and the face turned to the right, it would appear natural that the head should be drawn to the left. But this is a mistake, and instead of which M. Dubrueil remarks, the head should in the first place be inclined to the healthy side, and then the Surgeon should simply exaggerate the existing position of rotation. Before, however, applying any apparatus, the Surgeon should move the head about as recommended by Bonnet, in order to break up any adhesions that may exist. This done, an apparatus should be applied to keep the head in position.

Another form of wry-neck is that designated articular, but M. Dubrueil reserves the description of this variety to a subsequent lecture. He then referred to some of the other varieties of muscular wry-neck. There is, the lecturer stated, an intermittent variety which is either irregular or periodical. But these forms may be looked upon as orthopædic rarities and curiosities. The mode of attack of the irregular type is variable. M. Connus relates a case in which a Tyrolian used to be seized with wry-neck each time he went to table. Webber speaks of a case in which attacks of wry-neck were brought on by sorrow, but which lasted only a short time. In the second variety, on the contrary, the periodicity is such that it may be allied to certain forms of intermittent fever. In this case the administration of the sulphate of quinine would be perfectly justifiable. Another variety of the affection under notice consists of functional spasm of the muscles of the parts concerned, of which "writer's cramp" constitutes a type. MM. Duchenne, de Boulogne, and Bouvier have published a remarkable case of this form of the disease, though the above designation is a complete misnomer. The case occurred in a young lady who used to be seized with spasmodic contraction of the muscles of the forearm and hand each time she sat to her piano. These gentlemen endeavoured to effect a cure by exaggerating the contractility of the antagonistic muscles by electrization and a system of gymnastics, but without avail. They then tried elastic bandages around the wrist, and even performed tenotomy, but without the slightest appearance of success. Another similar case was published by M. Legouest, Professor of Military Surgery at the Val-de-Grâce, which was attended with the same unsuccessful results. As for the paralytic form of wry-neck, it can be treated orthopædically only by mechanical appliances. Should, however, the antagonistic muscle be too rigid, it may be divided by the tenotome.

M. Dubrueil then took up the study of Pott's disease "(Mal de Pott)." He commenced by stating that this affection was certainly known to the ancients, traces of which may even be found in the writings of Hippocrates, the Father of Medicine; but it was only in 1778 that the first regular memoir was published on the subject. It is to Percival Pott that is due the honour of having first brought the affection to the notice of the medical public, and in 1780 he published another memoir on the same subject. Finding some difficulty in giving a restricted definition of this affection, M. Dubrueil stated that we must be contented with a description rather than a definition, as the malady is of so complex a nature that it cannot be founded on any particular character, group of symptoms, or anatomical lesions, as they are all so variable and inconstant in their appearance. Thus we know that this affection is sometimes due to osteitis, sometimes to caries, and sometimes to tuberculosis. In attempting something like a definition, M. Dubrueil states that the disease in question is essentially characterized by three symptoms, gibbosity, cold abscess or abscess by congestion, and paraplegia. But even these three symptoms are far from being constant; hence it often happens that the second, the third, and even the

first symptom is wanting. There is a fourth symptom which may be added, pain, but this is so variable and inconstant that it may be laid aside.

(To be continued.)

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, February 27th, 1875.

ROBERT McDONNELL, M.D., F.R.S., President, in the Chair.

Cerebral Embolism.

Dr. James Little showed the brain of a man, aged 35, who had been a performer on the trapeze. In June last, he was seized with sudden numbness in the right arm and leg. Soon afterwards he had a "fit," and was slightly unconscious; then failure of sight (atrophy of both optic discs), and for one day he lost the power of speech. Subsequently, locomotion became "staggering;" he had several slight epileptic seizures, and always the smell of beautiful flowers. Incomplete right hemiplegia, and complete aphasia supervened, and a suicidal tendency developed itself, which resulted in his throwing himself from a window, and sustaining a fracture of the skull. The left middle cerebral artery was completely occluded by a firm plug, and the area of brain supplied by this vessel was soft and diffluent, as was also the left corpus striatum. The third frontal convolution did not, however, appear softened.

Amyloid Liver.

Dr. Hayden exhibited a marked specimen of this disease, taken from the body of a pipe-maker, aged 26, who had been always in the enjoyment of good health, until ten months before his admission, when he was exposed to cold, three months after which he became jaundiced, and the liver increased in size. Diarrhœa was the most troublesome symptom. He never had had syphilis, or any chronic purulent discharge (Dickenson). The urine contained bile pigment and albumen. Pleuro-pneumonia set in a few days before death. The liver was very large, and throughout its substance was diffused a great deal of deep-green pigment. The kidneys were in a similar state, and both lungs in the third stage of pneumonia.

Passage of an Ascaris Lumbricoides through Umbilicus.

Dr. MacSwiney exhibited a male ascaris lumbricoides, nine inches in length, which was interesting from the fact that it had been removed by him, alive, from the umbilicus of a boy, aged seven, from which it had partly protruded. The boy had always been healthy, but there had been a fistulous condition of the umbilicus, with a discharge of "clean matter" from it since his birth. It was suggested by Dr. MacSwiney's colleague, Mr Kelly, that the worm might have escaped through the unclosed vitelline duct.

Strictura Urethræ—Calculous Nephritis.

Prof. Bennett exhibited the urinary tract of a Swedish sailor who fifteen months before his admission into Hospital had been injured by the fouling of the anchor, sustaining a fracture of both bones of the leg, and laceration of the perineum. Fistula in perineo resulted. He had frequent attacks of retention and an impermeable stricture. Urinary fever set in. Several small calculi were withdrawn in the loop of a catheter which had curved on itself in the endeavour to pass it. External urethrotomy was performed. Symptoms of renal colic set in, and he died in extreme agony. There was no retention of urine. In connection with the right kidney was an abscess which had opened into it by a small aperture on its anterior surface. The ureter was greatly ulcerated, and impacted in it was a calculus, beyond which no urine could pass. There was acute cystitis and a number of small calculi in the bladder and prostatic urethra. Prof. Bennett thought that the patient's death was not apparently connected with the operative procedures.

Bony Growths in Eye.

Mr. Wilson showed the left eye of a man, aged 40, which had been injured in childhood. Nothing abnormal was perceived externally; but on examination Mr. Wilson diagnosed the existence of a bony mass in the eye, which he consequently removed. There was no trace of the retina, and in the situation of the perforation of the optic nerve was a spur of bone. Mr. Wilson remarked that these growths originate in an irido-choroiditis; a plastic exudation between the retina and choroid occurs, which becomes organized and subsequently ossified, and assumes the cup-shape of the eye. These growths were external to the choroid.

Strictura Urethra.

Dr. Thomson showed a specimen which was interesting from the fact that it exhibited the condition of the past four days after the operation of urethrotomy by Maisonneuve's staff. The stricture was of nineteen years' standing, and the patient, who was in the Medical Wards with phthisis, from which he died, while endeavouring to pass water, felt something give way in his urethra. The catheter could not be passed, and urinary infiltration had set in. The bladder was much thickened. On the left side of the urethra were two incisions. A chronic abscess, the cavity of which would contain a small walnut, had opened into the urethra.

Simple Hypertrophy of Left Ventricle.

Dr. Hayden exhibited a specimen of this lesion, taken from the body of an intemperate man, who had died of uræmic convulsions, in whom during life a correct diagnosis of the condition of the heart was made by the detection—what Dr. Hayden believed to be its most characteristic sign, viz., doubling of the first sound. The walls of the left ventricle were considerably thickened, but the cavity was not altered in size.

Saturday, March 6th, 1875.

Tertiary Syphilis.

Dr. Thomson showed several specimens which he had removed from a patient who died in the Richmond Hospital from tertiary syphilis. He contracted the disease eighteen years ago; had a papulous eruption some months afterwards; periostitis in eight years; and in fourteen years necrosis of both tibiæ, and of parietal and frontal bones, with sarcocele. He died ten days after admission, comatose. The frontal bone was necrosed to the extent of four and a quarter inches by four inches, both tables being destroyed. The dura mater was very adherent to the brain, which was diffluent in its superficial anterior portions. On making a section, a small induration about the size of a hazel nut, was found in the white substance near the longitudinal fissure. Dr. Yeo, who had made a microscopical examination, believed this to be the remains of an old abscess dependent upon obliteration of a vessel. There were three osseous rib-like plates in the pleura of the right lung at its upper portion. In the left there were a number of masses, hard and carbonaceous-looking, showing the characters of chronic interstitial pneumonia. Hard, bony plates occurred here and there in the apex of right lung, and processes of a similar kind passed into its substance. There was a small calcareous plate in the tunica albuginea of the right testicle, and in the substance of the other, which was very much atrophied.

The gland structure in both had almost disappeared. The patient had no sexual desire. The tibiæ presented marks of old standing disease. There were two deep excavations in which a walnut might be placed, on the front of the bones. The patient had recently been subject to epileptiform seizures, and died owing to extension of the destructive processes of the brain.

Malignant Pustule—Intestinal Mycosis.

Dr. G. F. YEO exhibited the intestines of an ostler, aged 40, who had applied at his Hospital Dispensary on that day week, complaining of headache and shivering. Dr. Yeo observed he had also a pustule on his left cheek. Next day this pustule was larger; there was œdema of the neck; he was weak and staggering, and of a peculiar saffron-colour. The symptoms became aggravated; he had intense dyspnœa, and was delirious. Relief was afforded him by a free scarification of the tonsils. On the fifth day of the disease vomiting of a yellow fluid, resembling rotten eggs, set in, and continued all night. Next day he complained of intense pain at the umbilicus, became pulseless, and died. There was constipation all through. On *post mortem* examination the mesentery was found thickened, and enormously swollen, the colour of blood, and dense on section, resembling a mass of fungus hæmatodes. The mucous membrane of the stomach, which presented an hour-glass constriction, was studded with small black nodules, which also were found outside the pylorus, and throughout the duodenum. The jejunum, which was considerably distended, also contained similar smaller nodules, diminishing in number as the intestine was descended. There was here an œdematous condition of the valvulæ conniventes. The ileum was contracted, and the large intestine, which contained no nodules, extremely so. The heart and other organs of the body were healthy. An examination of some of the fluid contained in the stomach, which was similar to that vomited, showed that it was composed of recently removed epithelium, very granular cells, and clusters of large masses of bacteria, in every described form,(1) infiltrating the cells of the mucous membrane. The mesenteric glands were infiltrated with blood-corpuscles and bacteria, but presented no other sign of inflammatory change or new growth. Dr. Yeo referred to the researches of Buhl and others on Intestinal Mycosis, and said that in many cases of it, no pustule had been noticed. In connection with this observation, Dr. Yeo alluded to the case he had exhibited to the society last year,(2) which probably might have been an example of this disease. The enormous masses of bacteria in the present case must have occluded the intestinal vessels.

Sympodia.

Dr. KIDD presented an example of this form of monstrosity. The lower extremities were joined together down to the heels. There were no genital organs, and the anus was closed. There appeared to be but one umbilical artery, which was a continuation of the aorta. The pelvic viscera were deficient; scarcely a rudiment of the bladder being present, and no kidneys. The Wolffian bodies were prominent. The vessels of the legs were normal, as were also the muscles, with the exception of the adductor magnus, which was common to both.

Necrosis of Tibia.

Prof. W. STOKES exhibited a specimen, which was remarkable in that the disease had originated without any apparent cause. The patient was a man aged 25, and the thigh had to be amputated. The entire shaft of the bone was necrosed; the disease not being limited by the epiphysary line. There were numerous osseous sinuses and stalactitic growths.

(1) *Vide* IRISH HOSPITAL GAZETTE, Vol. II.: p. 299.
(2) *Ibid.* Vol. II.: p. 97.

SURGICAL SOCIETY OF IRELAND.

Friday, 19th February, 1875.

EDWARD HAMILTON. M.D.,
Vice-President, R.C.S.I., in the Chair.

Cases, with Observations on the Relations of the Histology and Clinical Surgery of Tumours.

DR. ROBERT MCDONNELL said that he wished to lay before the Society some cases—which he would use in illustration of the main subject of his paper—of tumours belonging to the connective tissue series, but which varied much, as well in their microscopic characters as in their clinical history and in their degree of malignancy or tendency to return after removal. The first case he referred to was one of a slow-growing, simple fibrous tumour, weighing two lbs., which was removed in 1869 from the right gluteal region of a girl, æt. 20. There had been no return of the complaint. *Case* 2 was an example of a fatty tumour of the axilla, composed of a large number of encapsulated fatty masses, the fat cells being entangled in a network of areolar tissue. The tumour was removed three times. *Case* 3 was one of glio-sarcoma of the orbit, which was published in full, with an illustration, in the IRISH HOSPITAL GAZETTE of July 1st, 1874. *Case* 4 was a typical example of giant-celled sarcoma of the lower jaw.(1) *Case* 5. In this case, one of spindle-cell sarcoma of the testis,(2) the tumour was removed, but Dr. McDonnell has since heard that the disease has reappeared at Poupart's ligament and extended into the abdomen. However, from what we know of the clinical history and progress of these cases, it is probable that it is not in the lymphatic glands but in the connective tissue of the cord and abdominal viscera that the disease has recurred. *Case* 6(3) was an enormous tumour of the breast, also a spindle-cell sarcoma, and very rich in mucine; in fact the tumour might be regarded as an example of myxo-sarcoma. *Case* 7 was one of a round cell sarcomatous tumour of the leg, for which the leg had been amputated.(4) The growth might be regarded as being almost entirely composed of rapidly-proliferating cells which had not gone beyond the stage of round cells. [The above cases were illustrated by microscopic preparations of the tumours in each instance; and in case 7 by the diseased mass itself.] Dr. McDonnell said that the above cases all belonged to one class of growths, and exhibited the various degrees of malignancy which are to be met with in the connective tissue group of tumours. The tumour in the first case had no tendency to return; in the second, although of a simple, fatty structure, it was recurrent, while in the other cases, although the growths were of more intense malignancy, yet none of them could be regarded as carcinomatous. As regards the undoubted difficulty attending the study of the subject of tumours, Dr. McDonnell thought that it was increased by the erroneous ideas held by some as to the relationship between their histological and clinical observation. He dwelt upon the importance of the study of the classification of morbid growths as based upon their structure, and paid a tribute to the labours of Döllinger, Schwann, and J. Müller, by which Virchow was enabled to construct a classification of tumours based upon their anatomy and mode of development. Thiersch's modification of Virchow's doctrine that all new growths originate from the cellular elements of the connective tissue; viz., the necessity of a genetic origin of tumours, was an extension to morbid growths of Remak's theory as regards physiology. In accordance with Thiersch's theory tu-

(1) *Vide* Report of Case in the Number of the IRISH HOSPITAL GAZETTE for Feb. 15, 1875: p. 63.
(2) Published, with three Illustrations, in the IRISH HOSPITAL GAZETTE, Vol. II.: p. 8.
(3) *Vide* Illustration of, and reference to, this Case in IRISH HOSPITAL GAZETTE, Vol. II: p. 7.
(4) *Vide* Report of Case at page 76 of Last Number.

mours of the connective tissue series (sarcomata), are distinctly separated from carcinomata, and all epithelial structures. Waldeyer and Billroth have adopted this hypothesis; and the latter only calls those tumours true carcinomata which have a formation similar to that of a true *epithelial* gland. Dr. McDonnell said he could not however agree with Billroth in thinking that the development from the germ layers of the embryo can be regarded as a fundamental histogenetic fact for the development and division of tumours, as the tissues springing from these germinal layers were too intricately blended together to determine whether a tumour sprung exclusively from any one layer. Clinical surgeons and physicians could not themselves define what they meant by malignancy as applied to a tumour, and yet they blame the microscope because it fails to tell them what morbid growths are malignant and what are not. There was no exact boundary line between malignant and benign tumours. Such tumours as he, Dr. McDonnell, had brought before the Society, could on account of their comparative simplicity of microscopic structure, be classified and compared with other similar tumours in other subjects and in other lands. Thus progress would be made and order result out of chaos. As regarded the classification of tumours there was no other system at the present day comparable with that based on their histogenetic characteristics as worked out by the microscope.

Dr. CORLEY referred to the rare form of tumour he had recently brought before the Society(1)—an epithelioma, having no connection with epithelial structure—and spoke of the beauty of Thiersch's theory, and the advantage it possessed as a means of classification of tumours for the instruction of students.

Prof. PURSER thought that the great diversity of structure which is often found in different parts of the same tumour, makes it very difficult to determine in a given case from which embryotic layer the tumour has sprung. The malignancy of tumours was entirely a question of degree. Malignant and non-malignant growths are not separated by any sharp line, but shade off gradually into each other, so that two tumours with pretty much the same anatomical structure will pursue, one an innocent, the other a malignant course. Nevertheless the anatomical classification was, Dr. Purser believed, the only one possible. For from the mere structure of a tissue, whether healthy or morbid, could never be deduced its properties while living. A useful knowledge of tumours could only be gained by the common work of both clinical surgeons and histologists; the one observing the life history of the growth, the other its anatomical structure.

The Strength of Muscle.

Dr. HENRY KENNEDY observed that he had been induced to bring forward the above subject in consequence of certain views recently advanced, especially by Professor Haughton in his *Animal Mechanics*, with which he, Dr. Kennedy, did not agree; viz., that the weight of a muscle was synonymous with its strength. He was of opinion that this view was too narrow, and that other factors besides the mere size of a muscle should be taken into account when calculating its strength. The special circumstances which the author of the paper thought should be considered with reference to this subject were, briefly, individual temperament; nervous and vascular supplies; the differences in the muscles of wild and tame animals; the differences of muscle in the same animal; the peculiar arrangement of the muscular fibres themselves; the leverage; the effects of habit, and the results of disease. Dr. Kennedy discussed these several supposed factors *seriatim*, and in a general way, illustrating his meaning by referring to familiar instances of muscular strength in the abstract, etc., etc. He said it might be assumed as certain that there was an inherent power in muscle which only required special circumstances to bring it into existence, and which was out of all proportion with the weight of the muscle.

The Rev. Dr. HAUGHTON said that although he agreed with 97% of Dr. Kennedy's observations, he failed to get any information from them. He concurred with Dr. Kennedy as to the effect of temperament in experiments on muscles, and was also certain that white, red, and brown muscles differed from one another; but Dr. Kennedy had not shown any experimental proof of this, or stated what were the co-efficients of these different muscles. In his work on *Animal Mechanics* he had shown that as the nerve supply and the blood supply of a muscle necessarily passed between the fibres, the larger the supply of fibres in an inch the greater the supply of nerve force and of blood, and the greater consequently the power of endurance. This particularly applied to the heart. He was sure that temperament had a great deal to do with both intellectual and muscular power, and that our mental power was not to be measured by the size of our brain vessels. Dr. Haughton proceeded to refer to the comparative muscular anatomy of man, the gorilla, and the chimpanzee, and dwelt on the observation of Prof. Dawson; viz., that in proportion as an animal devoted its forelimbs to the purposes of the brain, these forelimbs diminished in size, and that for that reason the forelimbs of men were smaller than those of the gorilla. Dr. Kennedy's objection, that the strength of a muscle was not in proportion to its weight, arose from a complete misapprehension of the whole scope and object of his, Dr. Haughton's, work. In no passage of that book could it be shown that the strength of a muscle was confounded with its weight. Dr. Kennedy had confounded two totally distinct things; viz., the strength of a muscle with the work done by a muscle. What he (Dr. Haughton) had stated, was merely a formulation in modern language of what Prof. Borelli, of Naples, had laid down 200 years ago; viz., that the work done by a muscle was proportioned to its weight. According to Borelli's proposition, which he had tested and proved, the *vis*, or strength, of a muscle was in proportion to its cross section; and a muscle two feet long and a square inch in cross section would be equal in its work to a muscle one foot in length and two square inches in cross section. Having illustrated his proposition by diagrams, Prof. Haughton proceeded to say that experiment had shown that the total work done by the contraction of a muscle was constant. Borelli's statement formed the basis of animal mechanics, and it was impossible to deny it. The work done by the muscle was the thing to be measured, not its mere force. Groups of muscles in any animals doing any kind of action could in this manner be compared with other muscles doing the same kind of work, the distinction of co-efficients being remembered, and the relative amounts of work bestowed by nature on different actions in different animals could be thus easily compared. They had only to get a healthy animal and measure rapidly, after it was killed, the weights of the different groups of muscles employed in different groups of action; and they would have an universal test on which they could base different muscular types, and which would enable them to classify animals with great precision. Many Germans and Americans had taken up the idea, the germ of which he had brought forward in his book, and were now weighing the muscles of every description of animal; so that after a few years the relative weights of muscles bestowed on different animals would form a part of the classification of those animals.

Dr. KENNEDY, in reply, thought that Dr. Haughton had conceded the whole point at issue by admitting that temperament and small size were modifying causes of the strength of a muscle, and he believed that work done merely meant endurance.

(1) *Vide* IRISH HOSPITAL GAZETTE, Vol. III., p. 30.

IRISH HOSPITAL GAZETTE.

VOL. III.] DUBLIN, APRIL 1, 1875. [No. 7.

Hospital Reports.

RICHMOND, WHITWORTH AND HARDWICKE HOSPITALS.

PURULENT OTITIS MEDIA,

WITH PERFORATION OF THE MEMBRANA TYMPANI, CAUSED BY THE INSTILLATION INTO THE EXTERNAL AUDITORY MEATUS OF SOME DROPS FOR THE CURE OF TOOTHACHE.

By C. E. FITZGERALD, M.D.,
Ophthalmic and Aural Surgeon to the Hospitals.

A YOUNG girl, about 17 years of age, presented herself some weeks ago at the Eye and Ear Dispensary at the Richmond Hospital. She stated that for some time past she had been subject to toothache, but that a few days previously she had suffered from a very severe attack in the left side. Having seen an advertisement in one of the daily journals of some remedies for the cure of corns and toothache, she visited the establishment from which the notice emanated, where some drops were instilled into the left ear, which she said scalded very much; in fact it felt as if "boiling water" had been poured in. This was soon succeeded by intense and excruciating pain in the ear, and some hours later matter began to flow from it.

Having syringed out the matter which lay in the meatus, I found a large perforation in the lower portion of the membrana tympani, engaging about a third of the entire membrane. The upper margin of the perforation presented an irregular appearance, which was due to a portion of the membrane on each side of the handle of the malleus having been destroyed, whilst the small part to which the extremity of the latter was attached remained intact. The upper portion of the membrane was hyperæmic, and of a dusky red colour. There were profuse granulations springing from the mucous membrane of the tympanum. The hearing was considerably affected, and the patient complained of annoying tinnitus.

Leeches were ordered to be applied to the mastoid process. This relieved the pain greatly, and subsequently a mild astringent lotion was directed to be dropped, three times daily, into the ear, the latter having first been carefully syringed out. Every day the patient visited the Dispensary, air was passed into the tympanum by Politzer's method, so as to blow out any secretion which might have collected, and occasionally the granulations were touched with nitrate of silver. The perforation is now healing up rapidly, the granulations are shrinking, and there is very little discharge. The patient still complains of tinnitus, and the hearing remains somewhat dull; if however, she continues the treatment, these will doubtless in time disappear.

This case seems worth recording as illustrating the possible danger which may attend the application of a popular remedy. In the present instance, at all events, some caution should be exercised, though the advertisement of this nostrum contains a strongly worded certificate from a well-known chemist, stating that it does not contain anything deleterious. Should such be the fact, the only supposition is that in this case some different agent was employed.

NORTH INFIRMARY, CORK.

NOTES OF CASES FROM THE SURGICAL WARDS.

DISLOCATION OF THE SHOULDER, WITH FRACTURE OF THE NECK OF THE HUMERUS.

Under the care of DR. SHINKWIN,
Surgeon to the Infirmary.
Reported by MR. MARTIN HOWARD, *Resident Pupil.*

OWEN M——, æt 72, was admitted on the 2nd February, 1874. On December 26th he was pitched from a cart on his shoulder against a heap of large stones. On being helped up, his hand "hung dead" by his side, and the slightest move he gave it caused intense pain. Thinking it was only numbed, he took no notice of it for a few days, until the shoulder swelled enormously, and grew very red and painful. He then consulted a Dispensary Doctor, but the considerable swelling which had taken place rendered the nature of the accident too obscure for his immediate diagnosis. Relief from pain having been afforded by the treatment adopted, the patient absented himself from the Dispensary until the 1st February, when the crippled state of his arm began to alarm him. The swelling having now disappeared, the true nature of the injury was recognized, and he was recommended to go to Hospital.

In addition to the ordinary symptoms of dislocation into the axilla, the patient assumed a posture which is well worthy of notice. When walking about, or standing, he kept the elbow resting on the hip, the forearm being thus flexed, and pressed against the chest; so that any move-

ment of the body did not interfere with the affected limb, or produce pain. On the 4th February the patient was put under chloroform, and the method of reduction by elevating the limb was first tried. It failed. The heel in the axilla was next tried, but failed also. The pulleys were next resorted to, Dr. Shinkwin keeping up extension while Dr. Hobart manipulated the head of the bone. The first attempt was a failure, and just as extension was being made a second time, Dr. Hobart ordered proceedings to be stayed, concluding from the extreme mobility about the neck of the humerus, and the fact of its being impossible to rotate the head, that there was also fracture. And so it proved to be. No doubt, during the time that had elapsed since the accident occurred, some ossific material had been thrown out between the divided portions of the bone, which prevented the fracture being diagnosed until the extension had broken up the adhesions. All further attempts at reduction were of course abandoned.

Remarks.—This case is interesting in many respects, and the discovery made during the reduction-process created no little surprise. It shows clearly how in all similar cases careful manipulation is a matter of the utmost importance, and that the manipulator ought always be on the alert for such complications. In dislocations, therefore, of old standing, it is well to be on the look out for fracture also, as well at the time of examination as at the time of reduction; for if this precaution be neglected, and the discovery of a fracture—should such exist—be not likewise made, the case may terminate dangerously for the patient's life, and fatally to the reputation of the Surgeon. Clinical observation failed to detect any external diagnostic character peculiar to the complicated injury; but possibly the position in which the patient held the arm when moving about may have had something to do with it, and is, at all events, well worthy of observation.

Original Lectures.

CLINICAL LECTURE
ON EPILEPTIFORM CONVULSIONS AFTER INJURY.

By Dr. LYONS,
Physician to the Richmond, Whitworth, and Hardwicke Hospitals.

Gentlemen—I now call your attention to the case of a young man, aged 26 years, who was admitted into Hospital on the 27th February, in a condition in which it is very important, but difficult, to establish a diagnosis. He could not be roused, showed no consciousness, his pupils were contracted, and his hands and arms were rigid. His history, as well as it could be gathered, was this:—Two years ago as he was going home in the evening, being, as he states, quite sober, four men set upon him, beat him and robbed him of whatever money he had. He was carried home, and was so ill that he was unable to leave his bed for nine weeks. Subsequently, by his own account, he became comparatively well, with the important exception of having occasional very severe headaches, up to last May, when he had a fit, foamed at the mouth, bit his tongue, vomited, was unconscious, remained unconscious several days together, and was ill for three weeks. From that period, his mother says, she noticed that he looked stupid, and almost always complained of pain in the forehead. On 26th December he was admitted into St. Vincent's Hospital, with some thoracic affection, but he makes no reference to head symptoms at that time, and he left that Hospital about the beginning of February. He had another fit on Wednesday, 24th February, vomited, complained of pain in the forehead, and worked in successive fits from half-past three to seven o'clock in the morning. He then became comatose, and remained so till he was admitted here on 27th February.

On admission he was perfectly comatose, his pupils were contracted, the arms and legs were rigid, at the left side of the body more so than the right; his tongue showed signs of having been severely bitten, he was very cold, his urine contained no albumen. The next morning I found him somewhat in the same condition, except that his pupils were normal. He was still completely unconscious, could not be roused or got to put out his tongue; his arms and forearms were somewhat rigid, but not as completely so as they had been; his pulse was very quick, temperature high, but not remarkably so, and he was passing urine and fæces involuntarily. He had been thus unconscious four full days and nights; his pulse was exceedingly fast and feeble, and he looked as if he was dying of some profound cerebral lesion.

We have had, as some of you will remember, cases somewhat similar to this in which death took place very rapidly, and on *post mortem* examination, extensive serous effusion was found at the base of the brain. He looked very like a man with serous effusion in considerable quantity at the base of the brain, which would overwhelm the power of the pneumogastric nerves, produce respiratory paralysis, bronchial effusion, and death very rapidly. Active treatment was, therefore, urgently called for. His head was shaved and very extensively blistered with vesicating collodion and a grain of calomel put on his tongue every hour. The next day his condition was somewhat improved; he was a little conscious, having during the preceding night been very noisy and troublesome, and trying to get out of bed. He could attempt to put out his

tongue, his pupils were normal, and the amendment continued, so that by the 3rd March he was able to protrude his tongue fully, answer rationally, and give some account of himself. He was by this time salivated, having taken in all about twelve grains of calomel. The plan we adopted was one of very rapid mercurialization, which I believed to be the only chance of saving him. A grain having been given every hour, he was by the second day under its influence, and by the third day salivation was fully and freely induced.

There was one condition of the patient remaining to which I would call particular attention. Though fully conscious, taking nourishment, asking for food, answering questions, and so on, he was still passing urine and fæces involuntarily. Now, that is a very important feature in a case once consciousness is fully restored. That circumstance made me look still more narrowly into the case, and inquire very closely as to the circumstances connected with the beating, as to the possibility of there being any permanent lesion or injury of the brain or its coverings. On examining very carefully we found a depression about one inch in length, one-eighth inch in breadth, and fully one-eighth inch or more in depth, in the middle of the forehead, at the junction of the frontal bones. His own account is that it resulted from the kick of a boot, but I cannot satisfy myself that a boot applied in any way would produce such a depression, and I dare say that by the time he got this injury he was not very conscious of how he was struck. I am disposed to believe that that depression gives us a clue to this man's singular history. Up to the time of the beating he never had anything, as far as we know, in the shape of a fit; he was subsequently ill nine weeks, he then suffered from occasional headaches, and in May last he took a fit, foamed at the mouth, bit his tongue, and was unconscious; he looked stupid after that, almost always complained of frontal headache, and then, when nearly a year elapsed, a similar condition of things was repeated.

Looking back on the history of a good many similar cases, I have come to the opinion that this case is best explained by the presence of a depression internally, corresponding to the mark on the forehead; that a portion of bone at the line of suture between the two halves of the frontal bone internally, has been driven in; that that condition sets going an irritative and then an inflammatory process in either the dura mater or arachnoid, or both, and that we have first the condition of irritation producing convulsions, and then of inflammation producing effusion, and so accounting for the coma. He has exhibited no condition of true paralysis such as would occur if the case were one of any form of true apoplectic seizure. If he had a copious serous or sanguineous effusion at the base of the brain he would be in a more or less complete condition of paralysis. If he had a unilateral effusion in one of the hemispheres he would have paralysis of the opposite side of the body. But he had no paralysis except of the functions of the cerebrum. His limbs were rigid, his arms were in a semi-flexed position, not fully contracted; you could move them to a certain extent, but still they were semi-rigid; and his pupils were contracted, all showing a condition of irritation, not of paralysis, either partial or complete.

Now you will ask me what importance I attach to the passing involuntarily of urine and fæces after the restoration of consciousness. I always attach great importance to that condition, and for these reasons:—It is only to be accounted for by some extreme depression exercised on the pneumogastric and sympathetic nerves, and that influence can only be exercised by some very limited cause acting at the base of the brain.

The passage of urine and fæces involuntarily I have known to present itself as one of the earliest symptoms in cases of slowly-forming tumours at the base of the brain. I well remember one very painful, lamentable, and indeed tragic case, in which this was the first noticeable symptom in what proved to be a prolonged history of a case of slowly-forming tumour at the base of the brain. A gentleman, who was engaged to be married, was standing up to dance in a drawing-room, when the sphincters gave way, and the involuntary passage of fæces took place, and singular to say, he was quite unconscious of it himself. Friends standing by were shocked, and hurried him from the room. He expressed the greatest astonishment when told what had occurred. Nobody seemed able to make out what was the matter. Some thought he must have been tipsy, but it was no such thing, for he was a man of singularly abstemious habits. Curious to say, he recovered voluntary power over the sphincters, and some time elapsed before this accident occurred again. In my experience, this symptom, which is often overlooked, is one of the earliest as well as most dangerous of those occurring in slowly-forming central disease of the brain. I remember another case in the person of a member of our profession, with whom I was driving to a consultation, when the same unpleasant accident occurred. He seemed perfectly unconscious of it, and had at the time no cerebral disturbance of any kind. In about two years subsequently he died of slowly-forming centric disease of the brain. In the other case there was occasional recurrence of this symptom, and then the diagnosis of deeply-seated tumour in the brain was made. He then was confined to bed; paralysis slowly forming ensued, and he died at the end of two and a-half years from the first incident in the ball-room. On *post mortem* examination, a tumour about the

size of a small walnut was found lying at the base of the brain, projecting upon the pons, pressing a little upon it, but not destroying its substance. There is no doubt that it was just at the very incipient condition of this tumour that the accident occurred from partial irritation at the origin of the pneumogastric nerves. Anything like complete paralysis of the pneumogastric nerves of course would be followed by respiratory paralysis and death, but this was the smallest possible degree of irritation, producing slight paresis of the pneumogastric and sympathetic nerves, and so causing this incident.

In the case before us, I believe that as the result of a blow on the forehead a portion of the crest of the suture of the two halves of the frontal bone internally was driven in, that being driven in, it irritates occasionally, and that so we have set going all the symptoms that result, the fit, convulsions, foaming at the mouth, vomiting, &c.; that then ensues a certain amount of subacute inflammatory action and effusion of serum at the base of the brain. The serum exercises pressure, and at the same time produces irritation. It is not sufficient in amount to produce actual paralysis, but it is sufficient to produce pressure on the origin of the pneumogastric nerves and carotid plexus of the sympathetic, and so derange the action of the intestines. In this way you have produced the condition of suspended mental functions, and suspended volition, from which, under the influence of vesication, and the absorbent power of mercury, the patient is restored for a time to his normal condition.

Almost immediately after recovering consciousness he wanted to go out of Hospital. He is still suffering from salivation, and is not well enough to go out. As soon as he is sufficiently restored I propose to have the advantage of a consultation with some of my surgical colleagues, for the purpose of determining if anything can be done in this very interesting case by the use of the trephine or otherwise.

Progress of the Medical Sciences.

REPORT IN PATHOLOGICAL ANATOMY.

By GERALD F. YEO, M.D., Dubl.,
Assistant Physician to the Whitworth and Hardwicke Hospitals; Lecturer on Institutes of Medicine in the Carmichael School.

CANCER.

The word tumour is now used in a much more restricted sense than is really conveyed by its original meaning, as it is generally applied to such swellings only as are permanent. Some writers call many kinds of fluid collections tumours, while others restrict the term to growths of new tissue. Even this definite but narrow view of the word often leads to difficulty in deciding whether a given swelling deserves the name or not, for it is by no means easy to draw a line between some forms of hypertrophy or hyperplasia, and an enlargement which no one would hesitate to call a neoplasm.

Without going into the question, what is a tumour, let us pass to that which every practical man is tempted to ask when he sees a swelling of any kind, namely, Is it malignant? The surgeon, after his operation, anxiously puts this question to the pathological anatomist, who often can give him only an insufficient answer, as the latter is in the habit of viewing tumours from quite a different standpoint, and makes use of a nomenclature, the very terms of which are strange to the practical man, or if they be familiar, they convey a very different meaning to his mind than that given to them by the pathologist. The fact is, the question, Is it malignant? is purely a clinical one, malignancy expressing a clinical idea that springs from the tendency to destroy life, which exists in a greater or less degree in most tumours, but is fortunately wanting in some few. It is a mere relative term depending upon a number of circumstances, of which structural peculiarity is far from being the foremost.

Some surgeons who see that malignancy must depend more upon clinical than structural characters, substitute the question—Is it a cancer? But this question is equally hard for a histologist to answer from the want of an adequate definition of the word. An author writing forty years ago says, "Although the term cancer possesses but little etymological recommendation, the moderns, enlightened as they are by pathological anatomy, employ it with a far more precise and settled meaning than the ancients."(1) Can we say this with truth now, when no later than last year, in the discussion of the London Pathological Society—a discussion of which England ought to be proud, thought their President—we find eminent authorities differing materially as to the meaning of the word?(2) Mr. J. Hutchinson "protests against the right of modern histologists to give a new meaning to the word cancer," and Mr. Simon "wishes to keep the convenient word to mean not only various forms of carcinoma, but also sarcoma and glioma." Cancer is then also claimed by surgeons to be a term expressive of a clinical idea, and appears synonymous with the vague word, malignant tumour. Pathological anatomists ought then to give up the exclusive right of using the word to the practical surgeon who may employ it, either with its ancient and original meaning, namely, a swelling with superficial veins resembling the claws of a crab, or with a more recent practical one, restricting it to carcinoma, sarcoma, and other malignant growths.

The want of a definite and general nomenclature no doubt leads to much confusion, and this confusion must always exist while clinical observers persist in dividing tumours into benign and malignant; or in other words arranging them according to the results they may produce on the general system instead of their individual characters. Surely as products of nature, they have a right to some form of classification, founded on their nature and anatomical peculiarities, and when so arranged, the various influences exerted by each class upon distant parts of the organism, may be more reasonably studied.

As Virchow(3) says, Pathological Anatomy must be treated in the same manner as other branches of natural science. Thus in Botany it is no doubt very useful to arrange such plants as are edible or poisonous into two distinct classes, but no one dreams of adhering to such a division to the exclusion of their botanical characters. Such qualities would form a very bad groundwork for scientific classification, for different plants of the same species, or even different parts of the same plant, possess properties which vary much in this

(1) Cooper's *Surgical Dictionary*. 1838: pp. 317.
(2) *British Med. Jour.* 1874.
(3) *Onkologie.*

respect. Or it may be very interesting, from an ecclesiastical point of view, to divide all men into the good and the bad ones. It would be frequently hard to draw the line between the two, and the degrees of such a distinction would hardly satisfy an anthropologist as adequate characteristics of the various races. So it may be practically convenient to the surgeon to call a certain kind of tumour "Lupus," but the structure and genetic relations of this wolf of the tissues, may differ widely from many others which share its preying propensities.

Of course it is of the greatest importance to study the degree of malignity belonging to each kind of tumour; but it is of much greater importance for Pathology, at the present state of our knowledge, first of all to have a definite classification founded on anatomical and histogenetic grounds. As in Zoology, when a good anatomical classification of animals has been fixed upon, the beasts of prey may be separated from the others, and called a group.

The malignancy, then, of a given tumour ought not to be decided upon until—(1), the class to which it belongs; (2), its anatomical relations; (3), its history; and (4), the vigour of the patient, have been carefully considered.

We find it necessary to use the word cancer in order to give the meaning of some authors, but we wish it to be understood that we do so not in the sense of malignant growth, but in the histological sense, namely, carcinoma or epithelioma, that is to say, containing cells of an epithelial type. Although many of the most malignant growths do not belong to this category, it may be taken as the most surely destructive form of tumour, and perhaps a brief analysis of the steps of progress which have been made of late years in the study of its structure and development may be interesting.

After Joh. Müller(1) had applied Schwann's theory of the free development of cell elements in structureless blastema, to the explanation of the formation of pathological growths, he gave the first accurate description of the structure of tumours, but he still adhered to the division into two great groups, "benign" and "malignant." At the same time, however, he distinctly stated that the structural elements of carcinoma differed in no essential point from those of benign tumours, and that the tissue of every tumour had its representative in the normal tissues at some period of the development of the body. In spite of this, which may be considered to be the first great rule in the histology of tumours, the specific cancer cell, as subsequently described by Lebert, was eagerly clung to as a convenient signboard of malignancy, and Müller's law was not recognized till long after Virchow had insisted on the facts:—that not only each cell in a tumour had its equivalent in the normal tissues, but that it also was the direct descendant of a pre-existing cell, which for him was the connective tissue corpuscle. Thus, the "cancer cell" came into disrepute, and pathologists were forced to look to the structural arrangement and the development of a tumour, rather than any specific element, in order to determine its true nature and rank in a scientific classification.

The mode of cell development, as propounded by Schwann, and accepted by Müller, was disputed from the first by embryologists. Reichert, in 1840, declared that he was unable to observe the formation of cell elements in structureless blastema, and Remak combated the theory of free cell development as quite as unlikely as that of *generatio æquivoca* for living creatures. Doubtless the credit of bringing forward the axiom "*omnis cellula e cellula*" is due to Virchow, for although Goodsir(2) and Redfern had described the multiplication of cartillage cells, their observations remained unheeded till Virchow described the same process to occur in the other connective tissues, the corpuscles of which he made the progenitors of all pathological processes, and the germative basis of all new growths. Although he did not deny that epithelial cells could reproduce their like, and thus form excrescences such as warts, he considered that the cells of connective tissue could also, by a kind of diseased action, produce epitheli, and this mode of development he believed to be the distinctive characteristic of cancroid and carcinoma. He described the process as commencing by the nucleation and cellation of connective tissue corpuscles giving rise to an enormous number of small round cells, which, while in an undifferentiated state, he called formative cells ("Bildungzellen.") These then become gradually converted into elements of an epithelial type.

This view which Virchow upheld in both his great works(1) with such wonderful power, had certainly the merit of putting out of the field the exudation theory of the humoral pathologists, and bringing the cell forward as the important element.

About the same time Remak discovered(2) that the earliest trace of the embryo was divisible into three layers, the upper and lower of which were destined to form the skin and mucous tract, and received the names horny and glandular respectively, while the middle layer was devoted to the development of the intermediate tissues, namely, the connective tissue and its derivatives. He laid down that these three germinal layers not only remained distinct throughout the development of the animal, but that in the adult the descendants of each layer were quite independent, and could only reproduce its like in regenerative processes; thus from epithelia came epithelium, and from connective tissue some form of connective tissue. He also applied this view to the formation of tumours, and said it was more easy to imagine that a small portion of the epithelial germ layer which had been cut off from the rest or gone astray in the early stages of the development of the fœtus, could, after remaining latent many years become active, and produce a growth with elements similar to its progenitor, than that cells could arise by a form of spontaneous generation in blastema, or in a pathological exudation.

It is, however, to Thiersch's work on epithelioma, published in 1865,(3) that we are indebted for bringing Remak's law of development to bear on the growth of tumours. He endorsed Remak's views, and disputed the power which had been attributed by Virchow to the connective tissues of producing epithelium. After an exhaustive historical and critical review of the literature of epithelioma or cancroid, he positively states, that the epithelial masses, to which this form of cancer owes its name, does not come from the connective tissues, and he founds his opinion on prolonged personal experience, of which he gives ample evidence by detailing an immense number of accurately observed and beautifully illustrated cases. He supports his views on the following grounds—(1) The transformation from a connective tissue corpuscle to a epithelial cell has never been directly observed. (2) Such a transition is directly opposed to the rules which have been observed to take place in the development of the embryo. (3) It is not supported by the mode by which epithelium is regenerated. (4) Such a theory is unnecessary, as this form of tumour may always be traced to some pre-existing epithelium. (5) The cell multiplication in the connective tissue of the stroma, is easily explained by the secondary irritation caused by epithelial growth. He considers the starting point of the process to be upon a

(1) *Krankhafte Geschwulste.*
(2) *Anatomical and Pathological Observations.* Edin.: 1845.

(1) *L. c.* and *Cellular Pathologie.*
(2) *Deutsche Klinik.* 1854: p. 170.
(3) *Der Epithelialkrebs, namentlich der Haut.* Leipzig.

loss of histogenetic equilibrium, between the epithelium and the subjacent connective tissue, which latter has lost power with age, while the epithelium retained its histogenetic energy. An undue proliferation of the under layers of epithelium thus occurs, by which processes are sent down into the connective tissue, which in its turn changes more or less its character, just as it does in the development of many glands, teeth, &c., which start from a dipping in of the external skin. Thus he not only deprived the connective tissue of its power of producing epithelium, but he also gave the epithelium the credit of taking the first step in the process of the development of epithelial tumours.

This was a serious divergence from Virchow's views, and seemed to get a helping hand from the investigations of His, who removed one of the great difficulties with which Remak and Thiersch had to deal.(1) He showed that the cells lining the connective tissue cavities—serous sacks, vessels, &c.—were not really epithelium in the same sense as that on the cutaneous and mucous surfaces, but that they were rather a modification of the connective tissue cells; and he proposed for them the name "Endothelium," now in general use, to distinguish these cells from true epithelium, as he believed they had no connection either with the horny or mucous layer of the embryo.

The cell elements which are crowded together in the alveoli of carcinoma have been usually acknowledged to resemble epithelial cells, since Virchow called attention to the likeness in his first paper on the subject in 1845.(2) The modern French school has laid more particular stress on this likeness, and suggested the term "Epithelial new growth," instead of carcinoma. The great majority of pathologists who have observed this similarity subscribe to Virchow's doctrine, that the connective tissue is the germative basis of all pathological change, while Remak's and Thiersch's ideas received but little attention.

However, in an able article published in 1868,(3) Waldeyer not only endorsed Thiersch's theory, but extended it to carcinoma; the exclusive origin of which he traced to epitheliform cells. For him there is no difference between carcinoma and epithelioma, except that their situations lead to different destinies. In all true carcinomata, as in cancroid, he recognizes epithelial cells as the essential characteristic, and thinks the changes which the various tumours ultimately undergo, depend upon the natural degenerative tendency of the epithelium from which it springs. Thus in skin cancers we frequently find the formation of hard masses of cells, like the horny layer of the cuticle, while in the breast fatty degeneration commonly occurs, which change he regards as an abortive attempt at the formation of milk. After a clear description of the disease in all its favourite seats, he comes to the conclusion, "that carcinoma is essentially an epithelial growth, and that it only occurs primarily where true epithelium already exists. Secondary carcinomata can only be produced by the direct propagation of the epithelial cells, which may be transported from their primary seat either through the lymph vessels, or, as emboli, are carried through the blood vessels to a suitable place, where they develop like the germs of entozoa." He calls attention to the fact that all the common seats of carcinoma are intimately connected with epithelium. He does not believe that the tumours so frequently described as true specimens of carcinoma occurring primarily in connective tissue, really belong to that class, and he states that all those diagnosticated as such, which he has had an opportunity of examining, have turned out to be varieties of sarcoma. He describes the mode in which the cells penetrate the tissues, and crowd in the lymph spaces, so as to form a kind of network. They may also extend to the lymph vessels, which can be seen distended on the surface of some of the serous membranes. In the solid parts, the tissue between the lymph-spaces forms the reticulæ of the cancerous stroma, which becomes gradually denser and thicker from the chronic irritation kept up in it by the cell masses in the spaces producing proliferation of the connective tissue corpuscles. To this source he attributes the broods of small cells which are so constantly found in the fibrous trabeculæ, and which Virchow thought were the earlier stages of the epitheliform cells he saw in such numbers in the alveoli. With regard to the first step in the process, Waldeyer does not agree with Thiersch, as he says, in old age the regenerative power of epithelium is rather diminished, in comparison with that of the connective tissues, and he believes the disease starts in the connective tissue, which becomes hypertrophied, indurated, and irregularly contracted, probably cutting off from the rest, small portions of epithelium, which then rapidly multiply.

In 1869 the views of Thiersch and Waldeyer met an opponent in Köster.(1) This author, following a point suggested by v. Recklinghausen, attributes the origin of the "cancer cylinders," as he calls the cell masses which occur in cancroid, to the proliferation of the cells lining the lymph vessels. He disbelieves in Remak's views on development, and discards the name given by His to the cells lining the connective tissue cavities, and neglecting the distinction, persists in calling them epithelium. He makes fine sections parallel to the surface, as in examining the subcutaneous lymph vessels, and he describes appearances which may be thus briefly enumerated. (1) In the peripheral parts of all epitheliomata anastomoses may be seen to take place between the cancer cylinders. (2) These anastomoses form networks, which in every respect correspond to the plexus of lymphatic vessels under the skin, and appear to be formed of prolongations from them. (3) Often in the centre of these cylinders of cells a round space or lumen exists, which is filled with a material of different refracting power. (4) Sometimes the cylinders are pierced by a blood vessel. (5) The cancer cylinders are not bounded by any *membrana propria*. From these observations he thinks he can safely conclude that the cancer cylinders represent altered lymphatic vessels. By the use of silver impregnation he is also able to persuade himself that the epithelium of the young cancer channels behaves in the same way to silver salts, as that of lymph vessels, with which it agrees exactly in its relations and distribution, but the vessels are no longer covered with the normal epithelium of lymphatics; on the contrary the cells are opaque, thick and rounded, and he could find every stage of gradation from the normal epithelium to the well marked cancer-cell. He then concludes, that not only do the cancer cylinders correspond to lymph vessels, but the epitheliform cells, which are crowded together in them, are the direct offspring of the pre-existing epithelial cells lining those vessels. He denies that the connective tissue takes any active part in the growth, and even the small cell brood in the tissue between the cancer cylinders, he regards as white blood corpuscles which have wandered out of the vessels. These cells he thinks, under ordinary circumstances, would pass into the lymph vessels, and thence back to the blood, but in cancer they cannot do so on account of the lymph spaces being plugged with epithelial cells; thus he thinks the partial obliteration of the lymph channels would quite account for the masses of small cells in the connective tissue.

Köster believes that the skin plays but a passive *rôle*, and has nothing to say to the starting of the disease. Great development of the cuticle, and hypertrophy of

(1) *Die Häute und Höhlen des Körpers.* Basel: 1865.
(2) *Virch. Archiv.* Bd. I.: pp. 192.
(3) *Ibid.* Bd. 41; pp. 470.

(1) *Entwickelung d. Carcinome u. Sarkome.* Würzburg.

the hair bulbs and papilla, do certainly occur, but only as a secondary affection, depending upon the cancerous degeneration of the epithelium of the lymph vessels, which excites the neighbouring parts to increased action. This is then quite a new source for the cell elements in cancer, by which Köster rejects not only Remak's view of development, and denies the purity of descent which Thiersch and Waldeyer ascribe to pathological epithelial growths, but also takes from the connective tissue the germative power given it by Virchow.

In 1870 Dr. Classen, of Rostock, made an attack upon the views of Thiersch and Waldeyer, from a different standpoint.(1) The groundwork upon which his theory is built, is the emigration of the white blood corpuscles from the vessels, a process which was first observed by Waller, and subsequently was used by Cohnheim in 1867, as the weapon with which he made his surprisingly successful attack on the schema of cell division as described by Virchow, after it had reigned supreme for many years in all the schools of Europe. Having demonstrated the wandering capabilities of the white blood cells during inflammation, he declared their emigration from the vessels to be the great essential in the process, and said that white cells were the only source of pus, boldly demanding, "Who has ever seen the division of a cell taking place?"

Dr. Classen attempts to depose cell-division from its last holding, by handing over the monopoly of all heterogeneous growths to the white blood cells, by which accession they hold the same position exactly, as was formerly given by Virchow to the connective corpuscles, which are, according to Dr. Classen, to be regarded as superannuated and useless elements. The white cells of the blood have a great deal to answer for since their erratic propensities were discovered.

Dr. Classen's views are based upon a single case of epithelioma of the sclerotic and cornea, in parts of which he found many newly formed blood vessels packed with white blood cells, while here and there such numbers had escaped that the tissue around the vessels was thickly studded with them. These cells, Classen thinks, were transformed into the characteristic elements of epithelioma; they also formed the connective tissue stroma, and the thickening of the conjunctival epithelium. In fact, the ultimate destiny of a white blood cell only depended upon the peculiar characters of the locality to which it emigrates. The tissue becomes cleft and penetrated in all directions by the increasing number of cell emigrants, which are rapidly changed to the epithelial type by their associates. During these changes the cornea corpuscles can be observed to remain unaltered. He believes the blood vessels to be the starting point of the growth. The following being the steps in its progress:—In some place, which is covered with epithelium, and which has been for a long time in a state of hyperæmia, arise an immense number of small, round cells, which have probably left the vessels, or are at least seen to follow their course in the earlier stages. These cells crowd into the connective tissue spaces, and at the same time assume an epithelial form. The cuticle over the part increases in thickness by the addition of many small round cells, which have the same origin as those in the connective tissue. The growth then encroaches on the neighbouring tissues, being preceded by a continuous formation of new vessels, &c.

In 1872 a second paper from Waldeyer on the development of cancer appeared, in which he adheres firmly to his former opinions.(2) He admits the frequent emigration of the blood cells, but protests against the histogenetic omnipotence given them by some authors. He quite recognizes the value of Biesiadecki's discovery, namely, that wandering cells are commonly found in epithelium; but he disputes their convertibility into epithelial cells, which theory he considers to be an unwarrantable assumption, contradicted by a great number of direct observations of the regeneration of epithelium from old epithelial cells. He has long recognized the fact that the lymph vessels were the natural channels by which the cancer processes should extend; but he denies that Köster has brought forward any satisfactory proof of the development of the cells from endothelium; and he deems it strange that he, and all other investigators who have repeated his experiments, have failed in producing the preparations he described.

In 1872 Dr. Carmalt(1) attempted to follow Köster's observations, but found that the cells could be displaced from the lymph vessels in which they were packed by shaking the thin sections, and that when stained with silver they constantly showed the marking of normal endothelium. By examining perfectly fresh specimens with care on a warm stage, he was able to see and demonstrate the fact, that many of the cells lying in the spaces were capable of active amœboid movements. From this he concludes that, though the epithelial cells commonly lie in the lymph vessels, their presence then is due to their own movements and not to the propagation of the cells lining the vessels.

In 1873 Dr. Woodward,(3) who is well known for his microscopic photographs, published a lecture in which he appears to confirm Classen's observations, and attributes to the white blood cells the power of producing all the cell elements of cancer.

Last year Perewerseff(3) investigated the mode of propagation of four cases of carcinoma of the stomach. He could trace the disease in each case to the pre-existing epithelium which penetrated the perivascular lymph spaces. In the deeper parts also the spread of the disease followed the course of physiological resorption. He never conld find the endothelium of the lymph channels taking part in the production of the carcinoma cells, but they rather underwent fatty degeneration.

From the foregoing it will appear that our knowledge of the structure of tumours has made great progress within the past decennium. The question of the development of carcinoma is far from decided, and a wide field is left open to the workers in the young science of histology. The weight of evidence, however, appears to be in favour of the view, that all the so-called heterogeneous cells of carcinoma are always descended from pre-existing epithelial cells. The acceptance of this theory may force us to restrict our ideas of carcinoma to a small compass, and, with Bilroth(4) and Waldeyer to exclude many of the growths commonly placed in that group. But it certainly is more definite than any of the ideas given by other authors, and we generally find the limits of each group of diseases grows narrower the more definite and accurate our knowledge respecting it becomes.

(1) *Virch. Arch.* Bd. 50: pp. 56.
(2) *Ibid.* Bd. 55: pp. 67.

Reviews.

Commentary on the British Pharmacopœia. By WALTER G. SMITH, M.D., Dubl., Etc., Etc. London: Smith, Elder, and Co. 1875: Pp. 766.

THERE is, perhaps, no one branch of medical study with which its students are so liable to form a superficial and second-hand acquaintance, as that of Materia Medica as represented by the *British Pharmacopœia*. This may arise as much from the necessary dry and uninteresting character of the official volume itself, as from the existence of so many valuable and excellent

(1) *Ibid.* Bd. 55: pp. 481.
(2) Toner Lectures. No. I. Washington: 1873.
(3) Robin's *Journ. de l'Anat. et de Physiol.* 1874: pp. 337.
(4) *Chirurg. Path.*

"Text-books of Materia Medica," "Manuals of Therapeutics," "Companions to the Pharmacopœia," etc., etc., which, in addition to an enumeration of the officinal preparations, likewise contain in the same volume a varying amount of information relative thereto, conveniently arranged for reference and study. Notwithstanding the general usefulness of such works, they are for the most part devoid of any easily intelligible explanation of the procedures adopted in the manufacture and preparation of the articles of the Materia Medica, and of the steps to be taken in testing their purity. While Dr. Smith's Commentary comprises more or less of the principal features of the class of books just alluded to, it also gives a succinct account and explanation of the *rationale* of the processes pursued in the preparation of the various articles of the Pharmacopœia (and of many non-officinal ones as well), together with much useful information on therapeutics and pharmacy, such as is not to be found in any similar work; and altogether constitutes one of the most complete hand-books to the study of the Pharmacopœia with which we are acquainted.

In the general plan of the work the arrangement of the Pharmacopœia is judiciously followed. In each instance after the title of the article, with its derivation, follows, when such exists, its chemical symbol and atomic weight; its history and origin; chemical relations or composition; mode of preparation; physical characters and tests; physiological characters and antidotes, and its uses in pharmacy and in medicine. Each of these sections are concisely and clearly written; the style of the author being terse and explicit, and the facts stated accurate and well-founded, and apace with the knowledge of the day. The chemical portion of the work is particularly well done; the different decompositions which occur in the preparation of the various ingredients being fully explained by equations, in the new notation, and in a way which will be easily comprehensible to the student. In an appendix, the practical application of the various volumetric estimations mentioned in the Pharmacopœia are also expounded, and several illustrative examples worked out.

Very ingeniously borrowing an idea from the plan of a genealogical chart, the author has in the case of the principal metals, constructed a table for each by which the mutual relation of the parent substance and the derivations therefrom are shown at a glance. Numerous other tables and synoptical lists are scattered through the work, many of which exhibit considerable originality in their compilation, and will doubtless prove most useful. Some simple chemical rules of solubility, etc.—which may be said to form the basis of scientific prescribing—and a well-arranged and copious index, complete a most useful volume, and one which we should recommend every student of medicine to possess.

While it is evident that the author has written an excellent and scientific commentary on the *Pharmacopœia* with the praiseworthy intention—which should never be lost sight of by his readers—that both volumes should be studied together, we question whether he would not have rendered his work a more generally useful one had he given the doses of each preparation, and its composition, where a compound, as well as the preparations into which it may enter. He would thus, in our opinion, have increased the value of a work which, as it at present stands, is highly creditable to the industry and ability of the author.

Extracts from Journals.

PROFESSOR HILDEBRANDT ON THE TREATMENT OF FIBROID TUMOURS OF THE UTERUS BY THE SUBCUTANEOUS INJECTION OF ERGOT.—Since the publication of Prof. Hildebrandt's first paper on this subject in the *Berlin. klin. Wochenschr.*, Nov. 25th, 1872, a large number of the Profession have, on the strength of his recommendation, been induced to try the subcutaneous injection of ergot as a remedy in cases of fibroid tumours of the uterus. Now, though in many cases it has undoubtedly been successful in relieving some of the most serious symptoms, still the treatment cannot as yet be said to be extensively adopted, the greater number of medical men apparently thinking that the chances of success hardly counterbalance the unpleasant consequences which are almost certain to follow its use. Such being the present state of public opinion, an abstract of a paper published by Prof. Hildebrandt in the last number of the *American Journal of Obstetrics*, in which he answers most of the objections that have been urged against this treatment, shows how the ill effects following its use may be avoided or reduced to a minimum, and gives the results which he has obtained since his first paper was published, cannot but help many, who are still undecided, to come to some definite conclusion on this matter. The objections that have weighed most against this treatment are:—First: that it is too painful; Second: that it usually produces abscesses at the seat of injection, and often causes symptoms of toxæmia; and Third: that it is ineffective. In answer to the first of these objections, Prof. Hildebrandt states, that, only in one case was the pain suffered by the patient so great as to make her refuse to continue the treatment after the fifteenth injection, even though she was conscious that she had derived benefit therefrom. As a rule the pain was not so great as to cause any impediment to the continuance of the treatment. The amount of pain varies greatly in different individuals, and has several distinct causes. It is in the first place partly caused by the insertion of the needle, and the mechanical distension produced by the injection of the fluid. Secondly, it is partly due to the chemical irritation excited by the fluid itself. Thirdly, it is chiefly due to the powerful uterine contractions produced by the ergot. Now, as far as the pain is owing to the first of these causes, it is an objection which holds good against all subcutaneous injection. The second is greatly lessened if Wernich's watery extract is the preparation employed, and only enough of glycerine added to the solution (1 part of the extract to 5 of water), to prevent the formation of fungi, which increase greatly the irritation produced in the tissues. In ordinary cases a Pravaz's syringeful is injected at each sitting; when the patient is very sensitive and the injection causes intense pain this may be reduced to half or a quarter the quantity. Prof. Hildebrandt thinks that the occurrence of violent pain two or three hours after the operation is a favourable symptom, as it shows that the uterus is contracting powerfully. That such pains are due to uterine action is proved by their being likened to labour pains by the patients themselves, and also because they are most frequently observed in cases where the cavity of the uterus is large and the walls intact. The first three injections are usually the most painful, the pain gradually diminishing as the treatment is persevered in. Some parts of the abdomen are more sensitive than others; on which account we should inject in the neighbourhood of the umbilicus rather than in the inguinal regions. The pain is greatly lessened if the patient maintains the recumbent posture for some time after the operation. With regard to the second objection; the total number of hypodermic injections of ergot which Prof. Hildebrandt has seen must be fully one thousand. In no case where he himself performed the operation did an abscess form at the seat of the injection, and this accident only occurred in three of his clinical cases, where the injection was made by his assistant, it being in one case clearly due to the solution having been injected too superficially. In order, therefore, to avoid this accident, a good fold of the skin of the abdomen should be lifted up

between the forefinger and thumb, and the needle of the syringe inserted perpendicularly for two-thirds of its length. Cases of unusual susceptibility to the action of ergot are rare. In one case, however, a patient complained of vertigo, defective control of her lower limbs, and slight spasms of the flexor muscles of the forearm, after six injections. These symptoms disappeared entirely in the course of two days, but returned immediately when the treatment was resumed. In four other cases the treatment had to be discontinued at the 30th, 50th, 60th, and 195th injection. After a fortnight's interval, during which time each patient took a warm bath daily, the treatment was resumed without producing any symptoms of toxæmia. In answering the third and gravest charge that has been brought against the treatment, viz., that it is ineffective, Prof. Hildebrandt says, that the reason why it has so often proved so, is because it has been used in cases wholly unsuited for it. He then gives the details of nineteen new cases which have been treated by this method. These he divides into three classes. The first comprises those cases, six in number, in which not only were the symptoms relieved, but the tumour itself perceptibly diminished in size. The second class consists of eleven cases, in which the symptoms were relieved, but without any perceptible diminution in the size of the tumour; and the third class is comprised of two cases in which no beneficial result followed. The ergot acts principally by causing contraction of the uterine walls, which exert pressure on the tumour, thus leading to its absorption. In some cases it was observed that the tumour got softer before it got smaller. Prof. Hildebrandt thinks that this supports the opinion of Wernich, that ergot causes venous hyperæmia and arterial anæmia. The cure of any tumour therefore depends chiefly on its anatomical relations. Thus ergot can have absolutely no effect on a subperitoneal fibrous tumour. The consistence of the tumour is of great importance, old anæmic fibroids being hardly at all influenced. Those cases seem most favourable for this treatment, in which the tumour possesses that degree of softness and elasticity, which renders it difficult for us to distinguish it, merely by its consistence and shape, from a dense elastic cyst. Sound uterine walls are above all indispensable, and the submucous form of tumour is the one which, as most likely to be firmly compressed on all sides, most readily undergoes a diminution in volume. Cases where there is any chronic parenchymatous metritis, often combined with para- or perimetritis, are quite unsuited for the treatment by ergot. Those tumours which are not encapsuled, but whose outline is gradually lost in the uterine tissue, most readily undergo absorption. The author thus sums up the circumstances under which this treatment is most likely to prove successful. 1. When the tumour is richly provided with muscular tissue and possesses the consistence and feel of a tense elastic cyst. 2. When the tumour is submucous. 3. When the walls of the uterus are sound, capable of vigorous contraction, not too much attenuated by dilatation or stiffened by exudation in their substance, and when there is no peri- or para-metritis present. 4. As soon as the chronic metritis or para-metritis, which frequently accompany fibroid tumours have been removed by proper preparatory treatment, when the previously mentioned conditions again come into force. 5. When the tumour is unprovided with a capsule and merges directly without a boundary into the peculiar tissue of the uterus, which anatomical relation of uterine fibroids may be considered most favourable to their complete cure by absorption.

A. V. MACAN.

THE BLOOD IN RELAPSING FEVER—Dr. M. Laptschinski made frequent searches in vain for the filiform bodies (*spirillen*), which Obermeier described as occurring in the blood of recurrent fever (*vide* IRISH HOSPITAL GAZETTE, Vol. I. p. 107), but in a well-marked case he was greatly struck with the enormous increase in the number of the white blood corpuscles, particularly with the large proportion of coarsely granular cells which showed active amœboid movements, and, with the addition of acetic acid, several nuclei surrounded by granules. These he considers to be the same as Prof. Ponfick found and described as originating in the spleen in this disease (*vide* IRISH HOSPITAL GAZETTE, Vol. II. p. 45). He instituted daily counting of the corpuscles, and he found that the number of the white corpuscles, increased rather suddenly when the fever period came on, and decreased more gradually afterwards during the remission. When the fever was at its height, the relative number of the red corpuscles was so reduced that the counting for four days gave respectively 41·2, 50·8, 37·5, and 62 for every one white, *i.e.*, about ten times too many white. He concludes that with each attack of fever a discharge of the spleen contents into the blood takes place in this disease.—*Centralblatt*, No. 3, 1875.—G. F. Y.

ACTION OF MUSCARINE ON THE PUPIL AND ON ACCOMMODATION.—Among the effects that Schmiedeberg and Koppe observed were caused by muscarine, the alkaloid principle of *agaricus muscarius*, were, at first, marked spasm of accommodation, and subsequently, after a prolonged action of the drug, a considerable myosis. The latter effect varied notably in different animals. It was very marked in cats, and very slight in rabbits. Krenchel, in the *Hospitals-Tidende*, for March, 1874, gives a sketch of a series of interesting experiments that he and Mulder made in Donder's laboratory. After dropping a solution of muscarine, varying in strength from one to thirty per cent., in the conjunctival sac of his own eyes and in those of several colleagues, the near and far points and the diameters of the pupils were measured with great accuracy. The result of these investigations showed that muscarine, like physostigmine, produces myosis and spasm of accommodation, but that they also present the following differences in their action. Muscarine always produces spasm of accommodation first, and in some persons this is its only effect; if myosis occurs subsequently it lasts from four to six times as long as the spasm of accommodation. The action of physostigmine on the accommodation begins with an approximation of the near point, in other words, there is an increased power and range of accommodation; a stronger action of physostigmine is necessary to produce spasm. The action of muscarine, on the contrary, commences in all cases with a spasm, and it is only after stronger doses that approximation of the near point occurs, though the latter effect is less marked than the spasm. The result is, therefore, in all cases a diminution of the range of accommodation. Hence the author considers that physostigmine is better suited to antagonize atropine than muscarine.—*N. Y. Med. Record.*

TRACHEOTOMY IN CROUP.—M. Perier has communicated to the Surgical Society of Paris (*La France Medicale*, No. 14, 108), the particulars of a case in which he operated upon the trachea of the same infant twice at the interval of a month. In the first instance there was well marked croup. The improvement was rapid and respiration was soon normal. In a month afterwards the wheezing returned, and asphyxia was progressive. There was a rough souffle at the site of the cicatrix. Everything indicated a mechanical obstacle there. The cannula had only remained five days in the wound in the first instance. The probability was that granulations had developed internally. A second

tracheotomy was deemed necessary, the incision passing through the cicatrix, but M. Perier did not find anything abnormal in the trachea. The cannula remained in for forty-seven days. The child recovered. M. Perier recommends that the wound should not be allowed to heal without deep cauterization.

W. T.

THE TREATMENT OF ABORTION.—Dr. Mundé writes to the *N. Y. Med. Record* (Jan. 30), strongly recommending a mode of manipulation for the purpose of removing the ovum, which was first described by Dr. Hoening, of Bonn (*Scanzoni's Beiträge*, Vol. VII., 1873). Hoening recommends to express the ovum, either entire or in part if the fœtus be already removed, by means of bimanual compression, two fingers of one hand being introduced into the vagina and passed as far up as possible into the fornix vaginæ, and the other grasping the uterus through the abdominal parietes, thus firmly compressing the organ between the fingers of both hands and slowly and surely expelling its contents. If the uterus is anteverted or anteflexed, as is usual during the earlier months of pregnancy, the two fingers should be passed into the interior *cul de sac*, or the corpus uteri may be firmly pressed against the symphysis pubis by the external hand alone (the bladder having been emptied); if the uterus is retroflexed, the two internal fingers go behind the cervix. The relaxation of the abdominal parietes in multiparæ (in whom, as has been statistically shown, most abortions occur), usually renders the seizure of the uterus by the external hand an easy matter. The facility and rapidity with which the expression of the ovum is accomplished, is, according to Hoening, surprising and gratifying, as also the absence of subsequent hemorrhage or puerperal trouble. The pressure in the uterus need not and never should be sufficient to do harm. Of course it is essential that the cervix be sufficiently dilated before this measure is attempted. Its advantages over the introduction of the speculum, the forceps and the curette, to say nothing of the old method of passing the finger into the uterus, are obvious.

COPPER IN THE LIVER.—Bourneville and Yvon state that they have treated several epileptics with ammoniacal salts of copper. One patient took 43 grammes (an ounce and a-half) of the salt in four months, at the end of which time it was stopped, as no satisfactory results appeared. Three months afterwards the patient died of tuberculosis, and general attention having been at the time directed to poisoning by salts of copper, a careful *post mortem* examination was made. The stomach and intestines were found unaffected by it, but the liver contained 295 milligrammes (1¾ grains) of metallic copper, which was more than twice the quantity found in each of two women who had died of poisoning by salts of copper, and which must be regarded as considerable after the eliminative process had been three months in operation. They conclude that ammoniacal sulphate of copper instead of diminishing actually increases the number of fits; and that the principal effects of repeated doses periodically increased are vomiting of alimentary substances, or of a glairy liquid having the colour of verdigris, colic, and transient diarrhœa.—*Gazette Hebdomadaire.* D. F. B.

CYANIDES IN ARTICULAR RHEUMATISM.—Dr. Luton states that he was accidentally led to employ cyanide of zinc in gout in consequence of cerebral symptoms developed in the course of the complaint. Struck by the good effects which it produced, not only on the cerebral complications, but also on certain articular and renal symptoms, he resolved to employ cyanides in arthritic affections, and particularly in acute articular rheumatism. The results of the cases which he has published, and of others still more numerous which he has not detailed, are designated marvellous. He has used two cyanic preparations, cyanide of potassium and cyanide of zinc. The latter is a white powder, inert, insoluble in water, tasteless, odourless, and yet really powerful. It can be given in pill, or, still better, suspended in mucilage. The doses are ¾ gr., 1½ gr., 2 grs., or even 3 grs. (5, 10, 15, 20 centigrammes), throughout the day. The cyanide of potassium is freely soluble, more active when properly prepared, and should be preferred. The dose is ¾ gr to 1½ gr. (5 to 10 centigrammes) in a day. Dr. Luton has never exceeded 2 grs. (15 centigrammes) which quantity he has observed to produce colic.—*Bull. de Thérap.* D.F.B.

THE BLEACHING OF BONES AND IVORY has been rapidly and successfully carried out at the museum of the *Jardin des Plantes*, by immersing the articles in spirits of turpentine, taking care that they are kept a short distance from the bottom. When treated in this manner and exposed to sunlight, a few days, it is said, suffice to free bones from fat and disagreeable odour, and render them beautifully white. Woods of different kinds may also be bleached in this manner. The necessity of keeping the articles from touching the bottom of the vessel is on account of the formation of an acid substance which collects at the bottom of this fluid, and is capable of attacking the substances being bleached.—*N. Y. Med. Record.*

RUPTURE OF AN OVARIAN CYST.—M. Conrad has published in the *Corresp. Bl. f. Schweiz. Aertze.*, 1874, No. 21, a very curious case of rupture of an ovarian cyst, which occurred in the Clinique of Prof. Breisky, of Berne. The patient was a widow who had had three children at full term. During her last pregnancy in 1871 an ovarian cyst began to develop itself. This was tapped in June, 1872, and again in July, 1873. After the last tapping the tumour attained a larger size than it had done before. During the month of November, shortly after having passed water she was suddenly seized with a strong desire to pass it again. This she did, and a quantity of a thick, brownish fluid came away, which filled two chamber pots. The diminution in the volume of the abdomen was so great as to cause momentary syncope. The following night she was attacked with fever accompanied with pain in the abdomen, the urine being normal. When the bladder was emptied by the catheter, the point of the instrument could be plainly felt through the abdominal walls, thirteen and a-half centimetres above the symphysis pubis. Neither a vaginal or rectal examination revealed anything. It must therefore have been a case of adhesion of the walls of an ovarian cyst to the bladder, and subsequent rupture of the cyst into that organ. *Rév. d. Scien. Méd.*, Jan. 1875.

A. V. M.

HÆMATOMETRA IN ONE HORN OF A DOUBLE UTERUS, WHICH HAD NO COMMUNICATION WITH THE VAGINA.—Dr. I. J. Nicolaysen publishes the case of a patient, aged 21 years, who was admitted into the Hospital of Christiania, on March 19th, 1873. She had been suffering for two years from pains in the right hypogastrium, which had gradually increased in severity. These pains were greatly augmented during menstruation, which though somewhat more plentiful than natural, occurred at the proper intervals. Since the pains first commenced she has observed a tumour growing in the right hypochondrium, which has gradually increased in size. On making an examination a movable elastic tumour was felt, from three to four inches long and about an inch broad. Lower down and towards the median line a second tumour was discovered, which filled the pelvis, and extended half an inch above the symphysis pubis. This tumour was firmer, but not so movable as the former one. They were both slightly tender on pressure. On making a vaginal examination

the cervix was found to be obliterated. It was concluded that the tumour was an ovarian one, which forced the uterus backwards, and was filled by adhesion, in Douglas' space. It was aspirated at its most prominent point per vaginam, and a small quantity of a viscid, brownish fluid drawn off. On the fourth day after the operation the patient got symptoms of peritonitis, and died on the 9th. At the *post mortem* the uterus was found to be divided into two chambers, each of which corresponded to an ovarian tube and an ovary; the right cavity had, however, no communication with the vagina, owing to which it had become filled and distended with menstrual fluid. In addition there were found traces of old peritonitis. The right kidney was larger than normal, and contained an abscess. The left kidney was absent, but the supra renal capsules on both sides were well developed.—*Nord. Med. Arkiv.*, Vol. VI., pt. I.

A. V. M.

Collodion in Cervical Adenitis.—Dr. Tourniè *(L'Union Médicale)* strongly recommends the application of flexible collodion when the superficial cervical glands are enlarged and threaten to suppurate and the skin over them is inflamed. The inflamed region is painted over with a double layer, and an additional layer is added during each of the next three or four days. The application is useless in deep-seated adenitis, or when the glandular swelling assumes a chronic form, without heat and redness of the skin. The object is to prevent the formation of abscess, but when this has actually formed, the application is useless.—*Boston Med. and Surg. Journal.*

Treatment of Uterine Polypi and Fibroids.—Dr. Collins, of New York, suggests (*N. Y. Med Record*, Jan. 30), giving ergot as a means for separating, as far as its attachments will allow, the body of a tumour or polypus from the wall of the womb before removal. He reports a case in which this object was effected by the above method of treatment, and asks whether in many of the cases that are treated as fibroid tumours of the uterus, in which the physician finds the tumour firmly and closely attached to the wall of the uterus, and almost imbedded in it, would not the careful use of ergot in many of these cases, change our diagnosis from that of fibroid tumour to simple polypus, and consequently alter our treatment in many cases, from giving temporary relief and using palliative measures, to a permanent cure by the removal of the morbid growth? Dr. Collins believes that the judicious use of ergot itself or in combination with opium will, in a large number of cases, materially help and simplify the operation of removal by producing sufficient artificial contraction of the uterus to enable that organ to separate, as far as its attachments will permit, the morbid growth from its walls; and that in doing so, the danger of including a portion of the wall of the uterus is removed, or at least greatly lessened, and in many cases a dangerous hæmorrhage avoided.

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, March 13th, 1875.

ROBERT McDONNELL, M.D., F.R.S.,
President, in the Chair.

Cirrhosis of the Liver—Calculous Pyelitis.

Dr. W. G. Smith exhibited some of the abdominal viscera of a temperate woman, æt. 48, and gave the following history of her case. For six or seven years preceding her admission into Hospital she had been subject to recurrent œdema of the face and feet. Her health during the last year had considerably declined. She caught cold two months ago, and, on admission, had general anasarca and ascites, and passed but a few ounces of albuminous urine of low specific gravity, 1015, and containing also a little blood and pus. The abdomen was tapped, and 112 oz. of fluid drawn off with considerable relief. However, the œdema increased; ecchymotic spots appeared on various parts of the body; stupor and coma supervened, and the patient died. *Autopsy.*—The body was well covered with fat: it presented an intense lividity. The brain was extremely œdematous, and the lungs voluminous, congested, and œdematous. The abdominal cavity contained fluid, but there was no peritonitis. The large intestine was distended with flatus; the spleen was not much enlarged, and there was no cystitis. There was multilocular sacculation of the right kidney, due to partial obstruction of the ureter. In a sac at the upper part of the kidney were two loose, spheroidal calculi, in contact with each other. They were composed almost entirely of ammoniaco-magnesian phosphate. The left kidney was also enlarged and acutely congested. The liver was uniformly contracted, weighing only 28 oz.; its greyish-yellow surface was nodulated, and on section numerous yellow nodules were found throughout the hepatic tissue, which, however, was not in a state of extreme fatty degeneration.

Cerebral Abscess—Disease of Temporal Bone.

Dr. Nixon presented the brain, and a portion of the right temporal bone, of a girl, aged 14, who had been admitted under his care into the Mater Misericordiæ Hospital on the 8th February with typhus. On the 21st February there was tonsillitis; she grew deaf, and profuse otorrhœa set in. On March 6th the otorrhœa, which had nearly ceased, returned; she became feverish—like a person in the cold stage of ague—with, in addition, a rolling movement of the head. Her temperature was 103°, pulse 160, and respiration 60 and suspirous. There was also vomiting of greenish matter. The patient, however, was conscious; there was no pain or stupor; but she emaciated rapidly, and an eruption of pemphigus appeared on her hands and feet. On March 10th a small discharge of blood took place from the right ear; her pupils rapidly dilated, and she died. *Autopsy.*—On opening the dura mater corresponding to the right temporal bone, about ℥iss of matter was discharged. There were two abscesses in this situation, one above the other, the upper one of which had burst into the cavity of the arachnoid. The roof of the tympanum was carious, and over the bone the dura mater was raised and of a yellow colour. A third abscess, due no doubt to venous implication, was discovered in the anterior extremity of the opposite (left) hemisphere.

Ununited Fracture.

Professor Bennett exhibited a specimen of ununited fracture of the tibia, complicated with a fracture at each end of the fibula. The original injury had occurred fifteen months before the patient—a Swedish sailor, who sustained at the same time a rupture of the urethra, which eventually led to his death [1]—could obtain surgical aid. The fracture of the tibia was nearly transverse, and the upper fragment was displaced outwards. The specimen illustrated the commonest cause of non-union of fractures: viz., want

(1) *Vide* p. 94.

of rest and of apposition of the fragments. There was a great amount of vascularity about the fracture; large vascular foramina containing large vessels being found leading down to the fracture. Numerous isolated fragments of blanched, compact tissue were embedded in the new bone. The medullary canal at either end was closed. The ankle joint was not injured, but a vascular membrane, similar to that described by Cloquet, Aston Key, Goodsir, and others, occupied the entire joint, and had, in some places, absorbed its cartilage.

Enchondroma.

The PRESIDENT exhibited the right, little, and index fingers of a girl, aged between 16 and 17, which he had removed in consequence of their being completely useless, and an inconvenient deformity from this disease; also a cast of the patient's hand. The disease had commenced ten years previously by a small growth on the side of the finger, which had gradually increased. It was of a multiple character, there being also similar growths on the other fingers of the right hand as well as on the left hand, the right foot, and on two of the ribs; thus exhibiting a remarkable diathesis, which was, however, not hereditary. The President drew attention to the presence of several little warty irregular bosses on the permanent cartilage of the heads of the meta carpal bones, and between the phalanges; and observed that he had noticed similar growths in three other cases of the disease.

Saturday, March 20th, 1875.

Acute Miliary Tuberculosis.

Dr. HAYDEN exhibited the thoracic and abdominal viscera of a labouring man, aged 30, who was admitted into Hospital on the 25th of January with anomalous feverish symptoms which ran a very irregular course. The patient's temperature fluctuated considerably, between 99° and 103°, and his pulse ranged between 90 and 120. He became incoherent, and towards the termination of his illness was harassed by a teasing, dry cough. These grave symptoms were quite disproportionate to the result of physical examination of his chest, which only disclosed, with normal resonance, some sub-crepitant râles and rhonchi. Acute tuberculosis was diagnosed, and the pulse rate and respiration having considerably increased, the patient died on the 10th March. The lungs, liver, kidneys, and spleen presented, both on their surfaces and throughout their parenchyma, a uniform dissemination of miliary tubercles. The heart was small; the liver was fatty, its cells being quite filled with oil. Its surface exhibited the characteristic granular condition, which at first was deeply blood-stained. The spleen was remarkably large, and the mucous membrane of the small intestine presented several patches of hyperæmia. This case was evidently an instance of primary tuberculosis, as no cheesy deposition was found in any of the viscera.

Perforation of the Vermiform Appendix.

Dr. FINNY showed the cæcum of a young woman who was admitted into Hospital on the 12th March with symptoms of acute peritonitis. She had been suffering from pain in the abdomen and constipation for some days previous to the advent of her very acute symptoms, and had taken a good deal of purgative medicine. The patient died on the 15th, and on *post mortem* examination universal peritonitis was found, most evidenced however on the right side, where the omentum was glued to the cæcum. On raising this up, the point of a foreign body, which subsequently was ascertained to be a pin, was found protruding from the appendix, and this portion of the bowel was observed to be of a gangrenous colour, and very soft and friable. The lower end of the pin was thickly covered with calcareous matter, composed of phosphate and carbonate of lime and fatty and biliary matter.

Coincident Gout and Chronic Rheumatic Arthritis.

Prof. BENNETT exhibited the right knee and wrist joints of a Brewer's drayman, an intemperate man, who was admitted into the Medical Wards of Sir P. Dun's Hospital, with cardiac distress; ascites and anasarca; albuminuria; excessive articular pain, and hæmorrhage from the rectum. In consequence of repeated attacks of the latter, he was transferred to the Surgical Wards, and came under Prof. Bennett's care, who, unaware at the time that the case had been considered by his Medical colleagues as one of acute gout, from the characteristic position of the hands (of which casts were exhibited), and the extreme mobility of the lower end of the ulna, diagnosed the disease to be chronic rheumatic arthritis. The man died, and in consequence of the difference of opinion as to diagnosis, Prof. Bennett felt considerable interest in the *post mortem* examination, which showed that both diagnoses were correct. The right radio-ulnar articulation presented an example of chronic rheumatic arthritis alone; but in the knee-joint, both gout and chronic rheumatic arthritis co-existed. There was an osteophyte in the articulation and fibrillation of the cartilage, with a grooving of the bone on the outer condyle, as well as denudation of the cartilage of the head of the tibia—all characteristic of chronic rheumatic arthritis; while over a greater part of the surface of the same joint, and especially where the cartilage was stripped off, there was superadded a white deposit of lithate of soda, characteristic of true gout. There were also chalky deposits in the pinna of the ear, which, on analysis, yielded lithate of soda. The kidneys were small, granular, and contracted, and in fact presented all the characters of the gouty kidney, with the exception of gouty deposit. The albumen in the urine in this case was of that chemical variety which was dissolved by nitric acid, and therefore liable to be overlooked in testing for it in the usual way. Prof. Bennett referred to the confusion there still existed in many minds as to the relationship between gout and chronic rheumatic arthritis; and referred to the cases establishing the co-existence of these two different morbid conditions in the same subject, which he had previously exhibited before the Society(1), and also quoted the late Mr. Adams' explanation of his first case.(2)

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, March 10th, 1875.

DR. GORDON, in the Chair.

A Case presenting Cataleptic Symptoms.

DR. GRIMSHAW said that the subject of his case was a tramp, aged 25, who had lived a very irregular life. Eight months before his admission into Dr. Steevens' Hospital, he was found lying insensible on the roadside, and was conveyed to a Workhouse Hospital. He appeared then to be sleeping off an epileptic fit, of which, however, there was no former history. The day after he was excited and violent, but in a few days became quiet again. He now began to exhibit cataleptic symptoms; his limbs would remain for long periods in whatever position they were placed; his fæces and urine were passed involuntarily, and he had to be fed

(1) *Proceedings of the Pathological Society of Dublin.* New Series. Vol. II., p. 136; and Vol. IV., Pt. III., p. 357.

(2) *A Treatise on Rheumatic Gout.* 2nd Edition: p. 309.

with a spoon by passing the food far back into the pharynx so as to excite the muscles of deglutition. Subsequently he was sent to Steevens' Hospital. He was now greatly emaciated, and presented symptoms of chronic pulmonary, and renal disease. There was considerable impairment of cutaneous sensibility. He remained, with his eyes nearly closed, in any recumbent position in which he was placed, and his arms would remain in any position they could be put, for fifteen or twenty minutes. He had some slight occasional manifestation of mental irritability at distant intervals, and once or twice he took some bread and fed himself. Finally, his cataleptic symptoms almost disappeared, and he continued comparatively well, but very weak; his debility gradually increased, and he died on January 25th. *Post mortem.*—An unusually large quantity of blood escaped from the cerebral sinuses, and there was extensive effusion into the arachnoid and subarachnoid spaces. The ventricles also were filled with serum which contained urea: the brain itself was anæmic. A careful examination of the spinal cord by Dr. McDonnell gave negative results. There was caseous degeneration of the lungs, amyloid degeneration of the kidneys, and considerable pericardial effusion.

Dr. EUSTACE thought that cataleptic symptoms often accompanied acute dementia. He related the case of a gentleman affected in this way, who, under the influence of music, would take up and eat his food. If the music ceased, he would stop. The patient recovered.

Dr. HENRY KENNEDY said we were ignorant as to the nature of catalepsy. He had seen symptoms somewhat resembling it in fever and in hysterical women.

The CHAIRMAN referred to the existence of renal disease and cerebral effusion in this case, and said he had never seen a case of well-marked catalepsy in which there was not some proof afterwards of pressure on the brain.

Dr. ROBERT MCDONNELL said he had examined the parts exhibited by Dr. Grimshaw with an entirely negative result. The portions of the cord and brain were placed in a fluid, which he now always used for his preparations, viz., hydrocele fluid, to which some bichromate of potash had been added. This neither contracted nor enlarged the preparations placed in it, and was not a hardening fluid. The substance of the cord and brain was so abnormally firm that the section exhibited had not been exposed to any hardening process.

The Treatment of Scarlatina.

Dr. JAMES LITTLE read a paper giving the conclusions at which he had arrived as regards the above subject from his experience of the present epidemic. He was of opinion, that in scarlatina, of all diseases, it is most necessary to abstain from the administration of medicine, unless there is a very distinct indication to be fulfilled, and reasonable grounds for believing that we have a drug which will fulfil this indication. In the present epidemic he had seldom used either chlorate of potash or tincture of iron, because they did not appear to produce any distinct effect on the symptoms, and appeared to increase sickness of the stomach and looseness of the bowels if already present, or sometimes to induce them; while extensive swelling of the neck or pyæmic inflammations of joints were not more frequent than amongst cases in which they were assiduously administered. Where there was severe inflammation of the tonsils, Dr. Little recommended clearing the throat twice a day, or in severe cases more frequently, with a camel-hair brush, dipped in a mixture of one part of glycerine of carbolic acid and two parts of water. A poultice kept firmly applied below and behind the jaws, was also advantageous; the sucking of ice did not appear to him useful, as the water which results from its melting entails frequent and painful acts of deglutition. For scarlatinous rheumatism an anodyne liniment and cotton wadding were the best applications. The intense headache, urgent vomiting, restlessness, and feeling of oppression which are sometimes present just when the eruption is appearing, are most quickly relieved by swathing the limbs and trunk in blankets wrung out of hot mustard and water. If there is restlessness, sleeplessness, and delirium, during the early days of the disease, the hair should be cut. When these nervous symptoms are associated with a high temperature, they may often be relieved by tepid sponging, or by the anointing of the body with fresh or benzoated lard. The application to the legs of flannels wrung out of mustard and water, and the administration of bromide of potassium is also useful. Leeches to the temples and an ice-cap to the scalp may be required. He did not believe there was any risk in a moderate dose of solution of morphia when indicated; and was of opinion that preparations of opium were much safer than chloral. When there is a condition approaching coma, and the secretion of urine was scanty or absent, Dr. Little has found tea or coffee the best remedies. He has seen the kidneys act more freely after a cup of rather strong freshly-made tea, than after medicinal diuretics; but if the water continues scanty was in the habit, in addition, of dry-cupping the loins, and applying a digitalis poultice, and prescribing a diuretic mixture. Vomiting and purging are always ominous symptoms in scarlatina. Dr. Little was, therefore, extremely careful to avoid any food or medicine which may provoke them, so endeavoured as far as possible to feed his patients on milk, given either alone or made into junket, or with tea, coffee, or soda-water. He avoided beef-tea, and used chicken-broth sparingly. He did not look upon alcoholic stimulants as very valuable agents in the treatment, their effect in injuriously exciting the patient being more marked than in most fevers. For the tormenting itching which attends desquamation, the inunction with lard was *the* remedy.

Notes on Scarlatina.

Dr. A. W. FOOT also made a communication to the Society on the subject of scarlatina. His impression of the late epidemic was, that although the mortality in the city, in general, was large, this was rather owing to its prolongation and general diffusion than to the severity of type it exhibited; and that fatal results occurred rather from the state of health of those attacked than from malignancy in the virus. This impression was founded on three classes of observations—first, the number of deaths was relatively, for scarlatina, small in the number of cases which came under his observation; in the Hospital it was 9 in 73, or 12·3 per cent.; secondly, the throat affections, and their consequences, did not seem as severe or as numerous as usual; and, thirdly, the elevation of temperature was not excessive. Out of 1,857 observations, seven cases on one or more occasions exhibited a temperature 105° F. or upwards; four of these seven died. The highest temperature observed was 106°·8 F. Having alluded to the valuable information that could be derived from the thermometer in scarlatina, and the extreme height the temperature occasionally rose to in the disease, Dr. Foot said that by sponging with vinegar and tepid water, and then changing to a fresh bed with cool sheets, he has, in a few minutes, reduced a morning temperature of 105° F. to 102·4. Though Wunderlich remarks that the temperature seldom exceeds 105°·8 F. in cases that terminate favourably, Dr. Foot had a case in which the temperature on the third night was 106°, and which made a good recovery, although the boy, 18 years of age, was not quite convalescent from typhus when he got the scarlatina. In striking contrast with this case of recovery from scarlatina after typhus, was

one of typhus after scarlatina, which proved rapidly fatal, probably on account of renal disturbance bequeathed by the scarlatinal attack. Dr. Foot has not met with a case of genuine relapse in scarlatina. He has observed two cases of second attacks, one of which —that of a medical student who had recently had syphilis and taken mercury in abundance—proved fatal. This case bore upon the relation which Dr. Woakes(1) had suggested as existing between syphilis and malignant scarlatina. Two cases of rötheln were observed, the symptoms of which accorded remarkably with those of the cases published by Dr. J. W. Moore,(2) in whose communication on the subject, Dr. Foot said, will be found a very complete *résumé* of what is known about this affection. Dr. Foot next referred to cases presenting a miliary and pemphigoid eruption, and touched upon the subject of the contagium of the disease, which he thought was by no means peculiar to the exfoliating cuticle of the scarlatinal bubo, misnamed parotid swelling, which was due to irritation of the lymphatic glands of the tonsil, soft palate, and pharynx. Three varieties of buboes were observed: those which opened spontaneously, those which required an incision, and those in which there was no indication of the formation of matter, but merely an œdematous infiltration of the parts; the latter cases died unrelieved. The buboes appeared to be a local result of the constitutional irritability of the lymphatics, and to depend upon the amount of pharyngeal ulceration. One patient, a man aged 33, had a severe attack of enteric fever immediately following his convalescence from scarlatina. The relation which Dr. Harley(3) considered to exist between these diseases was here referred to. Dr. Foot summed up his treatment in a few words:—"It was essentially eclectic, and in no respect was routine observed." Two prime conditions of treatment appear to be a judicious dietary, excluding nitrogen as much as possible in anticipation of the detriment liable to accrue to the renal organs, and the proper use of stimulants; these latter were frequently well borne in this epidemic.

Dr. GRIMSHAW had seen a great number of cases of scarlatina—over 200—in the two Hospitals with which he was connected, and he was much struck by the remarkable difference which was presented by the disease as it affected the patients in each. In one—Cork-street Fever Hospital—the patients were derived from the very poorest class of the city, living under the worst possible hygienic conditions, and the mortality was about 15 per cent.: in the other (Dr. Steevens') the majority of the cases occurred among the Constabulary, who lived under very favourable circumstances, and the mortality was almost *nil*. The principles of treatment in both institutions were the same. Dr. Grimshaw differed with Dr. Little in regard to the value of iron, but agreed with him that wine was not generally required. He referred at length to his experience as to the special features presented in the present epidemic, and concluded by again drawing attention to the influence of pre-existing unhealthy conditions in determining the type of the disease.

SURGICAL SOCIETY OF IRELAND.

Friday, March 5th, 1875.

JOLLIFFE TUFNELL, President, R.C.S.I., in the Chair.

Cases of Strangulated Hernia.

MR. B. F. MCDOWELL said that the urgency of a case of strangulated hernia, the importance of its appropriate treatment, and the diversity which exists in individual cases, invited a record of them. Mr. McDowell proceeded to lay before the Society details of six cases of this lesion, of which the following is a brief abstract:—CASE I.—*Oblique Inguinal Hernia of twenty years' standing—Strangulation, period three days—Herniotomy.*—In this case the bowel, which had been down for some time previously, became strangulated, and could not be reduced by the usual efforts of the patient, a woman, aged 51. On admission to Hospital on the night of the third day of strangulation, an enema was administered, and the taxis and inversion employed without any effect. Having been brought under the influence of chloroform, the taxis was again tried, with the result of causing a notable diminution in the size of the tumour. The next morning, the state of the patient not having improved, herniotomy was performed. The extreme thickness of the sac, which was opened, was remarkable; it contained about ʒiij of serum, but no intestine was included in it. There was no passage from the peritoneal process into the cavity of the abdomen. The bulk of the tumour, which existed before the operation, was fully accounted for by the thickness of the walls of the sac, and the fluid it contained. There was prolonged constipation after the operation, extending over ten days, and "prodigious" tympanitis, both of which were eventually relieved, after the second dose, by the exhibition of assafœtida in gr. x doses, every second hour, as recommended by Graves. The operation resulted in a radical cure. CASE II.—*Femoral Hernia—Strangulation, period four days—Peculiar Cyst Springing from outer side of Sac.*—Notwithstanding the period of strangulation in this case, the patient, a female, showed no urgent symptoms on admission into Hospital. The tumour was about the size of a bantam's egg, and had springing from its outer side, a second tumour of about half that size. The hernia was of eight years' standing, and previous to this occasion, could always be reduced by the patient's own efforts. By means of the taxis now applied in the usual manner, and with the greatest gentleness, the patient being under chloroform, the greater bulk of the tumour was returned. Speculations as to the nature of the unreduced portion of the tumour caused much anxiety, and the case was left until the following morning, when, after having had a good night, the patient, during the temporary absence of the nurse, walked to the water-closet. She suddenly "felt something give way within her," and when Mr. McDowell saw her, she was in a state of collapse, and died in an hour and a-half after getting out of bed. *Post mortem.*—There was found peritonitis, with fæcal and serous effusion; about two inches of gangrenous intestine, a foot from the cæcum, was included in the strangulation. There was considerable effusion of lymph around this portion of the intestine, and also surrounding the orifice of the femoral canal. On laying open the sac of the hernia, a remarkable cystic out-growth from its outer wall, exactly resembling a knuckle of intestine, was revealed. Mr. McDowell drew attention to the practical importance of this cyst, and also to the fact that the evidences of peritoneal inflammation ceased abruptly at the femoral ring, showing, in his opinion, that there was an alteration in the character, and in the susceptibilities to inflammation, of old hernial sacs. CASE III.—*Enormous Inguino-Scrotal Hernia—Strangulation—period forty-two hours—Herniotomy—Inflammation of the Tunica Vaginalis—Orchitis and Acute Hydrocele, subsequently to the operation.*—The original rupture in this case—that of a gentleman, aged 50—had taken place twenty years previously. The present was the first time the patient had been unable to reduce it himself. Taxis having failed, herniotomy was performed. The sac was laid open, and about a foot and a half of claret-coloured but glistening intestine came into view,

(1) *British Med. Jour.*, 1872, Vol. II., p. 380.
(2) IRISH HOSPITAL GAZETTE, Vol. II., p. 186.
(3) *Med. Chir. Trans.* Vol. LV., p. 102.

and about an ounce of sanguineous serum escaped. After the stricture was divided, the patient vomited, which caused several feet more of the bowel to be expelled. The patient went on well until the third day, when an enormous tumour made its appearance in the position of the hernia, which, indeed, it so closely resembled, that Mr. McDowell feared the rupture had returned. His bowels, however, had been moved. The swelling was believed to be due to the circumstances enumerated in the case. The patient recovered. CASE IV.—*Strangulated Inguinal Hernia—Strangulation, period twenty-eight hours—Successful Employment of the Taxis under Chloroform.*—This case, that of a young gentleman, aged 22, presented no marked feature of interest. The use of a truss seemed to effect a radical cure. CASE V.—*Oblique Inguinal Hernia—Strangulation, period twelve hours—Successful Employment of the Taxis—Subsequent Strangulation—Herniotomy.*—A man, aged 57; the bowel had twice before been strangulated and relieved, as on the present occasion also, by taxis. Three days after last employment of taxis he was discharged from Hospital, but readmitted the same evening, the bowel having become again strangulated. Taxis now failed, and herniotomy was performed. The sac, which was remarkable for its extreme tenuity, had to be opened. The neck of the sac was, however, thickened by organized lymph, and the divided stricture long and tense. CASE VI.—*Strangulated Inguinal Hernia of Left Side, followed by Profuse Effusion of Blood into the cellular tissue of the scrotum and neighbouring parts—Strangulation—period about an hour—Successful Employment of Taxis—Complete Absorption of the Effused Blood—Subsequent Orchitis—Recovery.*—A gentleman, aged 26, vomited while running after a hasty meal, and ruptured himself. Having been given gr. ij antim. tart., and gr. xx pulv. ipecac., his muscles became relaxed, and the taxis was successfully employed. Next morning an enormous effusion of blood, etc., as described in the heading, took place; but the case eventually did well. In conclusion, Mr. McDowell dwelt upon the importance of treating every case of strangulation of the intestine according to its exigencies, and the necessity there was for early advice.

Prof. STOKES thought that the mortality in cases of herniotomy depended on whether the sac was opened or not, and in his opinion in all cases where the strangulation was recent the sac should not be opened. In Mr. McDowell's case, which was recent, he stated that the sac had to be opened, but he gave no reason for making that statement. Dr. Darby's views as to strangulated hernia ought to be more generally known, namely, that they should be reduced without division of the ring, which was attended with the disadvantage of weakening the parietes of the abdomen.

Mr. STAPLETON said he agreed with Dr. McDowell, that each case of hernia should be taken on its own merits, and treated as it required. It was impossible to lay down rules as to whether the sac ought to be opened or not. There might be a very fine sac in which the stricture was in the neck of the sac, without dividing which the hernia could not be reduced. When he, Mr. Stapleton, met with a femoral hernia that was more than twenty-four hours old, then he let the taxis alone. If it were an inguinal hernia, the taxis might be tried, but he had known in both classes of hernia cases in which relief had been obtained by operation, but where on the man getting a fit of coughing the intestines gave way. He was of opinion that in all these cases the bowels ought to be left undisturbed as long as possible. The following instructive case was related:—On one occasion when Mr. Stapleton was paying a professional visit in the country, he was asked to see a poor woman, from whose symptoms he diagnosed a strangulated hernia. This was reduced by the taxis with great ease, so much so that he was led to examine the other groin, where he found another tumour which had been down four or five days, but which the woman had not paid any attention to. Taxis failed to reduce this, and in the evening, when he returned to operate, the woman was dead. Mr. Stapleton also alluded to the amount of latent peritoneal inflammation occasionally present in hernia, and also to the absence of any signs of peritonitis in some fatal cases, and gave illustrative cases of both.

Prof. MACNAMARA spoke of the importance of leaving the patients quiet after the hernia was reduced, and of making no attempt to move the bowels, but let them act of themselves.

Dr. HENRY KENNEDY spoke of a degree of force being successfully used by the late Mr. Peile in the employment of the taxis, which seemed to him marvellous. He also referred to the puncture of a hernial sac by the aspirator as a means of its reduction, and likewise to the method of inversion,(1) a method which had proved successful in one case in which the patient had been suspended over his (Dr. Kennedy's) shoulders.

Mr. H. GRAY CROLY condemned strongly inversion of the body, which had been unsuccessful in one of Mr. McDowell's cases, and had also been followed by a fatal termination in a case under the care of the late Prof. Geoghegan, the hernia passing beyond the reach of the surgeon. In his opinion operation was too frequently delayed in these cases, and he thought if having tried the taxis once fairly, the operation was then performed, there would be very few deaths. He had always taught that early operation was the great thing to be attended to, that the structures cut were nothing but skin and fascia, and that as it was an extra-peritoneal operation it was much safer than the taxis. As to the hernia coming up and down he did not think it made the slightest difference. Mr. Croly was strongly opposed to the administration of tartar emetic, and did not think they were justified in giving it in any case of strangulated hernia. He thought more persons died from the shock than from any other cause. As a general rule in a recent hernia the sac ought not to be opened, but the stricture was often found in the sac, so that it became necessary to open it. Out of a large number of femoral hernias he had never divided Gimbernat's ligament, and he could safely say that Gimbernat's ligament rarely, if ever, causes strangulated hernia.

Mr. B. WILLS RICHARDSON said that a valuable work on strangulated hernia had been published by Mr. James, of Exeter, in which he gives several cases where the patients had no symptoms of peritonitis, and yet they had most extensive latent inflammation.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, March 13th, 1875.

LOMBE ATTHILL, M.D.,
President, in the Chair.

A Case of Extra-Uterine Fœtation.

DR. DENHAM, after giving an interesting *résumé* of the literature of the subject, and of the varieties and results of extra-uterine gestation, detailed a case that had lately been under his care. He was called to a lady last August, and found her pallid, and nearly pulseless, with incipient vomiting, and complaining of great pain over the abdomen. He learned from Dr. Mitchell, who had been in attendance, that the patient after spending an evening with some friends, and walking home, was suddenly attacked with severe pain in the

(1) *Vide* IRISH HOSPITAL GAZETTE, Vol. II., pp. 208, 272, and Vol. III., p. 75.

abdomen, which she described as like the stab of a knife, accompanied with a feeling of weakness and sinking. Finding the pulse not indicative of much prostration, Dr. Denham looked on it as a case of great gastric irritation, and gave at once a draught containing twenty minims of Battley's sedative, with two or three drops of hydrocyanic acid, and left a similar mixture, small doses of which were to be administered every two hours, besides small quantities of brandy and soda water. He also directed the application of hot epithems to the abdomen. After a couple of hours she appeared much relieved. At 10 P.M. he found her a little weaker, and the stomach still sick, and he ordered iced champagne, and to continue the medicines. An extreme state of prostration, bordering on collapse, supervened suddenly, but she rallied. Bicarbonate of soda and prussic acid were given alternately, with a pill containing watery extract of opium and calomel; the iced champagne was continued, with iced chicken jelly, and beef-tea injections, with brandy in them, were given. Next day she appeared to have rallied, to be in less pain, and to have longer intervals between the fits of vomiting. Early the succeeding day, it was found that the collapse and vomiting had returned, and that she was rapidly sinking. She died at 11 o'clock. A *post mortem* examination revealed a ruptured tumour within the folds of the left broad ligament of the uterus, in the track of the Fallopian tube, about two and a-half inches from its uterine attachment. It was imbedded in coagula, and had burst at its distal end, tearing through peritoneal and other investments. He believed that if the nature of the case had been diagnosed before rupture took place, nothing could have been done. Supposing the case went to, or near the full period of gestation, and that the child was alive, would the Cæsarean section be justifiable in the hope of saving the mother or child, or both? On this question he reserved his opinion.

Dr. M'CLINTOCK said that the most important question in connection with the subject of extra-uterine gestation was that of diagnosis, as were a case diagnosed in time, means might be taken to avert the almost inevitable catastrophe. He believed Dr. Denham's case to be one of tubal gestation. In addition to the period of gestation at which the rupture of the cyst had taken place, the mode of death, and the fact that the uterus was enlarged and lined with decidua, justified this diagnosis.

The PRESIDENT commented on the difference in the mortality between abdominal and intra-mural or Fallopian gestation, as alluded to by Dr. Denham, and mentioned the well known case of a lady, who, twenty-five years ago, was the subject of extra-uterine gestation, and from whom the bones of a fœtus removed *per vaginam*. The lady is still alive, and well.

Dr. CHURCHILL, under whose care the lady above alluded to had been, described her case as one of interstitial pregnancy, and explained how he had detected and removed the fœtal bones.

Dr. KIDD spoke of the greater ease of diagnosis of cases of ventral than of Fallopian or ovarian gestation. He detailed the particulars of a case of the former kind, in which he had detected the existence of a fœtus lying outside the uterus in Douglas' space. He proposed to cut down upon the tumour, and remove it, but was overruled. The patient died.

Dr. J. A. BYRNE said that all these class of cases closely resembled one another. In the present case it was remarkable that the patient had lived so long after the rupture had taken place. He had never seen a case during the patient's lifetime, but he thought that the symptoms were so remarkable in this case, that a diagnosis of tubal rupture might have been made. He believed that it was not unreasonable to hope for recovery under such conditions, and hinted at the exhibition of large and repeated doses of opium.

DROGHEDA MEDICAL SOCIETY.

February 6th, 1875.

Dr. CALLAN, in the Chair.

Sympathetic Dyspepsia.

THE SECRETARY, in the absence of Dr. HALTON, read a paper for that gentleman on the above subject, with special reference to excoriations of the os and cervix uteri. The author submitted for the consideration of the Society a table indicating the leading features of twenty cases of uterine affections treated by him in the Kells Dispensary, in all of which dyspeptic symptoms had more or less predominated. Of the subjects of these all with one exception were married women. The great majority of them had been mothers, and with many the starting point had been miscarriage. In almost all the cases the result of uterine examination showed excoriations of the os or cervix, or a chronically congested state of the uterine organ. In many menstruation was normal. Leucorrhœa was frequently present; in some instances slight, in others very severe. Of reflex sensations, pain in the left side, often severe, occurred in the majority, pain in the back, soreness and stiffness of the whole body on awaking, headache greatly increased by exertion and numbness and tingling in the arms and legs, were most prominent. The latter phenomenon was specially alluded to by the author. Upon classification of the symptoms he was of opinion that in all cases of dyspepsia wherein ordinary treatment fails, if the subject be a married woman, who has borne children or had a miscarriage with the reflex sensations before referred to prominent, even supposing no menstrual disorder be complained of, a uterine examination is justifiable (and imperative, should leucorrhœa or menorrhagia exist), with every probability of detecting some altered condition of the uterus or its appendages. Many such remain undetected for years, but when diagnosed are readily amenable to treatment, as instanced by one of the cases tabulated. Dr. Halton drew special attention to one case of persistent vomiting, which, after a duration of three years, still continued unrelieved. He made an examination, and found slight discharge from the cervical canal. The right ovary also was somewhat tender. Treatment in this direction was then tried, but alike unsuccessful, when Chapman's spinal ice-bag was resorted to, and after four "gradually-lengthening" applications, perfectly arrested the vomiting. With regard to treatment, the author had found the strong nitric acid applications evidently satisfactory, while nitrate of silver had proved in his hands the reverse. In cases where the sound gave decided pain, and the application of the acid caused considerable smarting, carbolic acid (diluted with just sufficient water to keep it fluid) acted very well, and seemed to have a soothing effect. Where the granulations on the lips of the os were large and flabby, sulphate of copper was a very satisfactory application, its effects in such cases being much more rapid than the acids. To counteract vaginal discharge, a small blister over the sacrum was just as serviceable as a large one. Vaginal injections he regarded as inefficacious.

Dr. CLARKE said that within a very recent period he had successfully combated three very severe dyspeptic cases by means of treatment extended to the relief of diseased uterine structures. He differed, however, in the author's view of the inefficiency of injection, which he had found most applicable.

Dr. KEALY expressed his opinion in favour of the topical application of nitrate of silver, and cited a case in which it had proved curative.

IRISH HOSPITAL GAZETTE.

VOL. III.] DUBLIN, APRIL 15, 1875. [No. 8.

Hospital Reports.

CITY OF DUBLIN HOSPITAL.

CASE OF PROGRESSIVE MUSCULAR ATROPHY ARRESTED BY TREATMENT.

By H. FITZGIBBON, M.D.,
One of the Surgeons to the Hospital.

D. S——, aged 45 years, a farmer, was admitted into the City of Dublin Hospital on the 16th December, 1874.

Good pulse, 75 in the minute; tongue clean; appetite good; bowels regular, and general health unaffected.

On inspection, the whole muscular system of the right upper extremity was observed to be considerably atrophied. The pectoral muscles so fallen away that the ribs were seen prominently through them; the trapezius and deltoid greatly diminished in size and firmness, as contrasted with the muscles of the left side. The spine of the scapula standing up as a prominent ridge, showing the atrophied condition of the infra- and supra-spinatus muscles. The biceps was less atrophied than any of the above named muscles, and felt firmer and in better condition, but was smaller than that of the left side; the triceps was flabby and small; the brachialis, anticus, and pronator radii teres were in fair condition, but were smaller than the muscles of the left arm. The most remarkable contrast was presented between the muscles of the forearm and hand of the right side and left. The right hand presented a deformed appearance. The fingers seemed approximated, almost overlapping each other at their points, which were attenuated and claw-shaped; the whole hand was of a livid blue and white colour, like that of a person who had remained too long in the water. The muscles of the forearm were all greatly atrophied, and had lost their power of contraction; the ball of the thumb had become quite flat, and the muscles of the palm of the hand equally affected by the disease. He had lost the power of clenching his hand, and could not separate his fingers from each other.

Although the muscular development of the left upper extremity appeared good, the man stated that it was falling away in the same manner as the right had done, and he was convinced that the disease was attacking his legs also. This conviction induced him to come to Dublin for advice. There was no apparent atrophy of the lower limbs, but he complained of "rheumatic pains" in the upper dorsal and lower cervical region, in his left shoulder, and sometimes in his legs and feet. He stated that he had suffered from similar pains in an earlier stage of the disease, in the right shoulder and arm. He complained of peculiar twitchings in the muscles, which were partially atrophied, and these sensations, he stated, were beginning not only in the left shoulder, but also in his legs; they occurred irregularly, and he said they resembled the motion of a number of small eels or frogs moving under the skin. I was able more than once to see these fibrillary motions, by looking closely; they appeared quite involuntary and irregular.

This was the condition of the patient when he came into the City of Dublin Hospital. The history of his case is as follows:—He was a strong, active man, and used to work hard at farm labour; he was not left handed. When about 19 years old, he contracted syphilis, which was followed by secondaries, for which he was treated and recovered rapidly, and never had any return of the symptoms of the disease; he got married, and has a healthy family, grown up. In September, 1873, he was putting a large stone into a gap, with his right hand, when he felt something was hurt in his wrist; from this time it gave him pain to work, although he continued to do so for five months without seeking advice. At the end of this period, finding that he had lost the power of grasping a tool firmly, he consulted a medical man, who made him apply a tight bandage to his wrist; he found this gave him pain, and as he got worse he left it off, and began to use irritating applications, which were so severe, that he was obliged to give up using them in a week. His wrist was then leeched, and in March, 1874, an issue was put over the joint and kept open with a pea for some weeks, but he suffered so much pain in the shoulder that he had to let it close. The hand and arm were then strapped, after which leeches were again applied. In June, 1874, what he called a "Scotch dressing" was put upon the wrist; this he thought made him very much worse. In August, 1874, he begun to suffer from pain in the upper dorsal and lower cervical regions of the spine and along the lower margin of the scapula; these pains he attributed to the extension of the disease; although he had suffered from similar pains in the right arm and shoulder, he had attributed them directly to either the hurt to his wrist or to the remedies employed. Shortly

after the commencement of these pains in the back and neck he began to feel twitchings in the muscles of the left arm and shoulder; these occurred for the first time in the left arm, accompanied by a sensation of numbness, after prolonged effort in pulling hay, and to this cause he attributed the extension of the disease to the left arm. As the disease was steadily increasing, he came to Dublin for advice in November, 1874. He was first admitted into Dr. Steevens' Hospital, where he remained for fourteen days; while there, he for the first time perceived the muscular twitchings in his legs. On the 16th of December he came into the City of Dublin Hospital. At the time of his admission under my care, I tested the power of his hands with a dynamometer, and found that with the right hand he could only exercise a pressure of 2½lbs. upon this instrument, while with the left hand the instrument registered 70lbs. I put him upon the following treatment, feeding him well at the same time:—Iodide of potassium, gr. v, three times a day; extract of belladonna gr. j every night. Electricity to be applied daily to the spine and to all the muscles of the upper extremities, particularly those of the right side. This I did by means of an ordinary galvanic battery; using the interrupted current in preference to the continued, because I found the effect upon particular muscles was more obvious. On the right side the biceps and pronator radii teres acted fairly under the influence of the current, while the muscles on the back of the arm, the superficial muscles of the fore-arm, the deltoid and pectoral muscles did not respond to it at all; a small portion of the abductor pollicis contracted under a strong current, but the greater portion of this muscle was quite insensible to electricity. All the muscles of the left upper extremity contracted readily, and also those of the lower limbs; in fact the muscles of the left arm and shoulder appeared abnormally sensitive under the influence of the current. Having followed this treatment for a fortnight, I again tested the power of the right hand with the dynamometer, and found it had a power of pressure equal to ten pounds, in fourteen days more it produced a pressure of 18 lbs., and when the man had been two months under treatment he had a power of 22½ lbs. with the right hand and 80 lbs. with the left. He complained less of the pains and twitchings in his limbs, and the muscles of the right arm and shoulder were obviously larger and firmer than when he was admitted into Hospital. The most remarkable difference was to be observed in the right hand; its colour had become natural, the ball of the thumb was considerably increased, he could clench his fist, and had recovered the power of expanding the fingers one from the other. Encouraged by this result, I continued the same treatment until about the 20th of March, when I put him upon half quarter doses of the extract of nux vomica, as I thought the iodide of potassium was beginning to disagree with him; I at the same time began to use the constant current as the other battery had got out of order. He left the Hospital on the 2nd of April, intending to take a battery with him to the country, and I recommended him to continue the nux pills, as I found on the day before his discharge he had a power of 30 lbs. with the right hand and 80 lbs. with the left; showing a more rapid improvement during the ten days that he was taking the last named remedy, than during any similar period while under treatment.

One of the most remarkable features in this man's case was, that the muscles which at first did not contract in the slighest degree under an electric current, became very sensible to it, and even the muscles of the ball of the thumb contracted painfully for some time before he left Hospital, under a current which would not have had any effect upon them at the time of his admission.

Remarks.—In this case, the immediate exciting cause of the disease was supposed to be the hurt of the wrist. My impression is that the disease had been going on for some time before the injury to the wrist occurred, that it was the result of the disease, the atrophied muscles being unequal to the effort of lifting the stone, and that some portion of them or their tendons was injured. Again, the injury to the upper arm was owing to the weight being suddenly thrown against a diseased muscle, which, if it had been sound and firm would not have suffered. The points which I think of practical importance in this case are, first, the steady progressive character of the disease up to the time that the treatment by electricity was commenced; and, secondly, the sudden arrest of its progress under this treatment, and the continued improvement in all the symptoms for a period of three months. From this I argue that it is of the utmost importance that cases of this sort should be recognized in their early stages, for if the disease is capable of arrest when considerably advanced, why should it not be equally under the control of treatment at its outset, if not capable of actual cure? I gave this man iodide of potassium because there was a history of syphilis, and on account of the rheumatic pains of which he complained; the belladonna because I have known it do good in cases where I believed there was congestion or irritation of the nerve centres; the treatment by electricity I adopted because, as far as I can learn, all the cases of this disease which derived any benefit from treatment were treated with electricity in one form or another. Whether the rapid improvement which took place during the

short time that he was on the treatment with nux vomica was owing to any action of this drug or not I am not prepared to offer an opinion, but as a tonic I think it was probably of use in the case of one who had been so long confined to an Hospital, even if it had no direct effect in restoring muscular power.

NORTH INFIRMARY, CORK.

NOTES FROM THE SURGICAL WARDS.

TWO CASES OF SCALD OF THE GLOTTIS.

Under the care of Drs. HOBART and SHINKWIN, Surgeons to the Infirmary.

Reported by Mr. MARTIN HOWARD, *Resident Pupil.*

HAVING in a previous number of the IRISH HOSPITAL GAZETTE (1) reported a case of scald of the glottis, in which a certain plan of treatment was recommended, we bring the following cases under the notice of the Profession as further proofs of the excellence of treating accidents of this nature on the principle first advocated by Dr. Bevan—a principle which in three cases in our institution ensured success when it was almost despaired of.

CASE I.—UNDER THE CARE OF DR. HOBART.

Edward G——, æt 6, was admitted into the North Infirmary on Tuesday, 12th January, 1875. The mother stated it was customary for the boy to drink from the pipe of the kettle whenever he felt thirsty, as the spring water was kept in the kettle. On the day in question the mother was washing clothes, and had just taken the kettle of boiling water off the fire, when the boy, having returned from school during his mother's absence, seized the kettle, which was lying on the ground close to the tub, and eagerly drank off some of the fluid. On entering the house the mother found the boy on the floor crying, and apparently in great suffering, his face being quite purple, his breathing humid and stridulous, and his voice very husky. She immediately called in the Dispensary Doctor, and as soon as he came, the symptoms had become so aggravated that he ordered the woman to carry the child to the Infirmary at once "to be operated on, as an operation would be the only chance of saving the boy's life."

The patient was in a violent tremor when brought to the accident-ward; the face being bathed in perspiration and highly congested; the breathing rapid and accompanied with stridor, audible a good distance off, and an occasional croupy cough. The circulation was extremely quick, and the boy was unable to speak and much prostrated. The treatment adopted in the case previously referred to, was put into execution by Dr. Corby, House-Surgeon. A canopy was erected over the bed, and a constant vapour of steam maintained; three leeches were applied to the sternal notch, and allowed to bleed freely, and the following powder ordered to be given every two hours:—

℞.—Hyd. subchlor. gr. ii;
Antim Tart. gr. ¼.—M.
Fiat pulv.

Fresh butter was administered by the mouth.

The powders were continued for twenty-four hours, at the end of which time all the acute symptoms had subsided. The pulse came down to 100, the stridor disappeared, the oppression ceased, and the boy regained his voice and wonted quickness.

The powders were given now three times a day, and one of Smith's tela vesicatoria was applied over the sternum.

On Friday the child left Hospital cured.

CASE II.—UNDER THE CARE OF DR. SHINKWIN.

Patrick M——, æt 2, was admitted on Thursday, 25th March, 1875. While the mother was out, the child felt thirsty, and seizing hold of a kettle of boiling water, left incautiously on the hearth, swallowed some of the fluid.

The symptoms presented were much the same character as in the last case, and the only alteration made in the treatment was ordering two leeches to the sternal notch (the bleeding to be stopped when the leeches fell off) and giving a grain of calomel and an eighth of a grain of tartarised antimony in each powder.

The child had been brought to the Hospital in the morning, and in the evening the symptoms were so severe, despite the treatment, that tracheotomy was thought of. It was found, however, that in consequence of the first powder making the child sick in the stomach, the mother had not given the others regularly, and the non-improvement being thus accounted for, measures were taken to carry out the treatment, and next day recovery had taken place.

REMARKS.—These cases speak for themselves. There is nothing extraordinary in the treatment; nothing beyond the reach of any ordinary Practitioner in town or country.

When called in early it is especially applicable, and even in desperate cases it may be tried with the hope of success.

(1) Vol. II., p. 324.

DISTRICT LUNATIC ASYLUM, CORK.

CASE OF "AMAUROSIS" COMPLICATING MENTAL DISEASE—DEATH—NECROPSY.

By RINGROSE ATKINS, M.A., M.D., &c., Assistant Medical Officer to the Asylum.

JOHN N——, aged 35 years, admitted into the District Asylum, Cork, April 1st, 1874. The patient had been a seaman, and retired on a

pension. On examination his chest and arms were seen to be beautifully tattooed with nautical devices, and it was immediately noticed that he was completely blind, although outwardly his eyes appeared perfectly healthy and normal. As but little information regarding his history was contained in the admission form, application was made to the medical man certifying, but unfortunately no further particulars could be elicited, as the man was a stranger in the locality from whence he was sent. The patient was stated to have been insane for one week, and "masturbation" was assigned as the probable cause of the disease; no mention, however, was made of the "amaurosis," or its length of persistence. The mental symptoms he laboured under were those of mania, with general incoherence; he was turbulent, aggressive, and difficult to manage, and were it not for the loss of sight, would have proved a most troublesome patient. He could not speak a single sentence correctly, nor answer any questions regarding himself; he had delusions of a venereal character, and believed himself possessed of great wealth and power. There was no paralysis of any of the muscles of the organs of special sense, nor was there any loss of motor power over the limbs; he was tolerably healthy looking, strong and well nourished. No ophthalmoscopic examination, unfortunately, was able to be made. As the presence of syphilitic deposit around the pituitary body and optic commissure was considered as a *possible* cause of the loss of sight, an antisyphilitic plan of treatment was at first adopted, but this not producing any amelioration in the symptoms, was after a short time discontinued, and a supporting line of treatment substituted, but however, without success, as the unfortunate patient gradually declined; the maniacal symptoms by degrees gave place to those of secondary dementia, incoherence was followed by apathy and indifference, bodily weakness slowly supervened, the urine and fæces were passed unconsciously, and all the symptoms pointed significantly to brain wasting. For the last few months he fell into a state of hopeless fatuity; later on, it became impossible to get him up; bedsores quickly followed, which in spite of the use of the water-bed and careful treatment, rapidly spread, and after weeks of what, to any person whose nervous system was not reduced to such a low state of sensibility, must have proved intense suffering, he gradually sank, and died on March 14th, 1875.

Necropsy, eighteen hours after death.—The body was emaciated, but not to such a degree as might have been expected. No cicatrices of any old eruptions were observed. On removing the calvarium, the cranial bones were found to be thinned and the diploë absorbed. The dura mater was slightly adherent at the vertex, during the removal of the brain; the process of membrane lining the sella turcica was found to be strongly adherent to the bone and to the carotid arteries, especially at the left side. The base of the skull was quite normal, no irregularity or growth of any kind being present. On examination the following appearances were observed in the brain itself. At the base the pituitary body was found to be slightly enlarged, rounded, and vascular, especially that portion lying over the optic commissure. On lifting this up the optic nerves and commissure were found greatly flattened, the last named structure being partially obliterated, the nerves appearing to spring directly from the brain substance; the left optic tract was also flattened, and it, together with the nerves and commissure were of a dirty greyish colour, and semi-gelatinous appearance, looking as if the nerve substance had been destroyed, and a thickened connective-tissue framework left; the right tract still partially retained its white colour. The pons, medulla, and cerebellum were of notably large size and healthy looking. On reversing the brain the pia mater over the superior surface of the organ was at certain points pursed out with fluid, and patches of milky opacity and thickening existed here and there, underneath which, adhesions between the membrane and cortical substance were present; the left anterior lobe was non-symmetrical with the right, being one inch shorter and its apex flattened. On section the grey matter of the convolution was thinned and of a dirty grey colour. On dissecting down to the ventricles, the cerebral substance was moist, and not vascular, the lateral ventricles were slightly distended, laterally, and contained a small quantity of clear fluid, the fifth ventricle was also distended with serous effusion, its walls thickened, bulging into the lateral ventricles, and forming a sac between these cavities. The third ventricle was still more distended, its outline distorted, the soft commissure was still however intact, but narrowed and elongated, its floor at the anterior and posterior perforated spaces was softened, and the optic thalami did not appear as plump as normal, and were of a dirty colour; the corpora striata looked healthy, and the choroid plexuses were somewhat congested. The pituitary body, optic nerves, commissure and brain substance adjacent were removed for microscopical examination, as also were portions of the various lobes of the organ. No other cavity of the body was opened.

From the portions of the brain above mentioned, which had first been hardened in iodized spirit and bichromate of potash, thin sections were taken, tinted with carmine, and set up in "Dammar" and "Canada Balsam," when the following appearances were observed in the several parts:—1st. The pituitary body. On the surface of the enlarged portion, many of the

loculi were seen to be occupied by a granular material of a yellowish colour, occupying the place of the cells; towards the centre of this portion a quantity of fibroid material was found highly coloured by the carmine, and distinctly separated from the normal structure surrounding it; in this were several empty spaces occupied by masses of a perfectly homogenous structure and irregular outline, looking like "cretaceous concretions." The remainder of the gland structure was quite healthy. 2nd. The optic nerves and commissure. Sections in various directions through these, showed the nerve substance of the nerve bundles to be almost completely destroyed, what remained being reduced to a molecular material; the delicate connective-tissue framework was greatly proliferated, coarse, and wavy-looking. On transverse section the nerves presented a honeycombed appearance, the nerve bundles being represented by empty spaces, and the thickened connective tissue forming their encircling boundaries; the minute vessels were irregular in course, and their walls variously thickened, but not to any extent. 3rd. The brain substance. Sections through the parts adjacent to the commissure showed the vessels to be thickened in some parts, and contracted within their sheaths, whilst in others they were pouched and sacculated, and the nuclei proliferated on their walls. Several spots of disseminated sclerosis were observed, and in the grey matter immediately adjacent to these spots, the cells appeared aggregated and atrophied, being surrounded by clear spaces. In the grey matter of the optic thalami, the cells were covered and clouded with "fuscous granules," of which species of degeneration they were beautiful examples; in many of them the nucleus was entirely obscured, whilst in others it was still visible, surrounded by the granules. The vessels in the immediate vicinity to these affected cells had highly refracting particles of hæmatin attached to their walls, together with granules of the same appearance as those present on the cells. Sections through the frontal and occipital convolutions also showed the atrophic condition of the cells, and altered vessels and neuroglia, the occipital convolutions being least affected, but nowhere, save in the optic thalami, was the the "fuscous" condition of the cells observable.

Remarks.—The comparative rarity of this complication of mental disease, and the appearances found on *post mortem* examination, renders this case, I think, worthy of being put on record. The very imperfect clinical history leaves us almost entirely in the dark as regards the etiology of the disease. The autopsy showed atrophy and degeneration of the nervous tissues, but to what was this condition due? Neither the gross appearances present, nor the sections examined, pointed to syphilitic disease, and it appears to me that the most tenable hypothesis lies in the supposition of a primary inflammation taking place in the optic nerves, extending backwards, and diffusing itself to and around the pituitary body. Congestion and stasis of the vessels in the superior convolutions probably followed, giving rise to the psychical disorder. Proliferation of the connective tissue of the optic nerves gradually supervened, on the destruction of the nerve tubules, together with wasting of the brain cells, the result of malnutrition, consequent on the alterations taking place in the vessels. As to the "fuscous degeneration" taking place in the cells, but little is known, its localization in this case to the cells of the optic thalamus, is an interesting, but inexplicable fact; the occurrence of granules of a like character on the walls of vessels in the immediate neighbourhood of the degenerated cells, leads one to suppose that the change, whatever may be its nature, is not confined to the cells only. That the flattening and partial obliteration of the optic commissure may have been to a certain extent due to the pressure of the enlarged and vascular pituitary body I cannot doubt, but this I believe to have been secondary, and the result of the thickening consequent on the extension of the inflammatory process, from the nerves to the body; that this was the case seems evident from the fact that the effects produced were not localized, but extended both behind and before, in the tract and nerves. What the starting point of the spots of "disseminated sclerosis" was is also difficult to determine; it probably may have depended on a subacute inflammation, with proliferation of the nuclei of the spots affected. The occurrence of the amatory delusions in connection with the highly-developed cerebellum, is a fact worthy of being kept in view as bearing on the functions of that organ.

Original Lectures.

CLINICAL LECTURE ON ENCHONDROMA.

By R. McDONNELL, M.D., F.R.S.,
One of the Surgeons to Dr. Steevens' Hospital.

Gentlemen—I wish to draw your attention to the rather remarkable case of enchondroma I operated on, on Saturday last, occurring in a girl named P——, aged between 16 and 17 years. She had noticed those tumours growing on different parts of her body since she was about six years old. I would venture to think that it is possible they have been forming a much longer time. There are a considerable number of them. Some are seen in this cast, that on the little finger of the right hand has attained a large size, and is not unlike a large potato; that on the

forefinger was not quite so large. The tumours made these fingers quite useless. When writing she held the pen between the middle finger and thumb, and did not use the forefinger at all. Besides these two, there are five smaller ones growing on the other digits of the right hand—two on the ring finger, two on the forefinger, and one on the thumb. On the toes of the right foot also two more of them have made their appearance, but are of small size. In the left hand, too, there are three small ones, and on the ribs there are two which I have no reasonable doubt are of the same structure.

Now, growths of a cartilaginous kind have been grouped by Virchow and other writers into two classes, ecchondrosis and enchondroma. By ecchondrosis we mean a cartilaginous growth on cartilage; it is the same to cartilage that exostosis is to bone; it is a morbid cartilaginous growth springing from a place where there is some cartilaginous matrix. Enchondromata, on the contrary, spring from a place where there is no cartilage, and may occur in a great variety of places. Usually they are connected with bone; at the same time they are not unusual in connection with glands—the parotid gland, the mammary gland, and the testicle, where, I need not tell you, there is normally no nidus of cartilage out of which they could spring.

The case we have here illustrates these conditions, ecchondrosis and enchondroma. I have observed in a considerable number of these cases that besides the large mass of the tumour there are over the cartilages of the phalanges a number of little bosses. Here is the head of the metacarpal bone of the little finger which I sawed off, and you see instead of a smooth, round, polished structure, as it ought to be, it is rough, uneven, and has irregular wart-like bosses over it; these are ecchondroses; they are growths of cartilage where there is already cartilage existing. The mass of the tumour, however, which I have here in section, is a large mass of cartilage, in a situation where there was no cartilage already existing—where it has apparently sprung from, and is connected with, the bone. The articulations are free as regards motion, every one of them, and these firm, jelly-like cartilaginous masses are composed of cartilage, the bone having in some places remained quite firm, hard, and intact, these having apparently sprung from it. I have made some sections of both parts, and placed in the microscope for your inspection one made vertically through a portion of this cartilage growing from the head of the metacarpal bone. We see some portions of healthy cartilage and a number of proliferating cartilaginous cells, quite different in arrangement and structure, showing the progress of the disease in this situation. We can compare this with a section of the other, in which we find the cells are almost entirely composed of hyaline cartilage.

You know that normally we meet with three varieties of cartilage which are spoken of in the account of normal tissues—hyaline cartilage, fibrous cartilage, and reticulated cartilage. The tumour that we have here is composed, so far as my examination has gone, almost entirely of hyaline cartilage. But we sometimes find those morbid growths partly composed of fibrous and reticulated cartilage; and there is another tissue of a rather remarkable kind which sometimes appears in enchondromata, and indicates to us the precise position this kind of tumour holds in the series of connective tissue growths. If you take a little of that soft gelatinous tissue you are familiar with in the funis of a fœtal child, and place it under the microscope, you find it composed of peculiar stellate cells; and this is a typical example of that variety of connective tissue, which from containing mucine gets the name of mucous tissue. We occasionally find in enchondromatous growths a good deal of this mucous tissue containing cells, stellate in form, and containing a good deal of mucine in its meshes.

The histology of these cases is remarkable. You see here the different forms of cartilage, the hyaline, the reticulated, and the variety known as fibro-cartilage. Any of these structures may be found in enchondromatous growths. Sometimes they are composed of one, sometimes of another, sometimes the whole three mixed together. Those enchondromatous growths are usually seated in the bones. They are found, as this case very well illustrates, in various parts of the skeleton. The parts most frequently affected are the phalanges of the fingers and toes, and the metacarpal bones. It is met with, however, in the larger bones. Cases of it are found in the humerus, the femur, and the tibia. More rarely it is met with in the jaws, pelvic bones, and scapula. I have only seen one instance in which it affected the scapula. The accompanying drawing shows the appearance in this case. It grew from a small base, and expanded to a considerable size from the under surface of the scapula close to its lower angle. It also, as P——'s case illustrates, grows from the ribs, and sometimes, but much more rarely, appears in the vertebræ, the clavicles, and the sternum. Virchow, in his lectures, says "Müller has already drawn attention to this very characteristic phenomenon, that ordinarily, even when the entire bone has become enchondromatous, the articular surfaces remain intact, and that in consequence the permanent cartilage does not participate in the affection." That is exactly one of the points on which I differ from the ordinary account. I have examined several cases like this, in which I found these bosses, irregular, warty growths, over the

permanent cartilage, showing that it does, to some extent, participate in the disease. It does not apparently form the original nidus, neither does the complaint make such rapid growth, but it is a mistake to say that it does not in some degree participate in the affection. In this specimen you see the articulation quite complete, but on making sections there you see in the microscope that it is not normal cartilage, but an abnormal variety, dovetailed in amongst the normal cartilage cells. Another remarkable feature connected with this disease is, that the tumours are translucent: when you look through one even with the blood circulating during life it is translucent.

One of the things that makes this subject perplexing to students is, the immense number of names that have been given, so that you hardly know where to look for an account of it. All these different names are given:—Cartilaginous tumour, enchondroma, chondroid tumour, spina ventosa, osteo-sarcoma, osteo-steatoma, and cartilaginous exostosis.

The disease is one which does not make very rapid progress. It has been growing in this girl ten years, and in all probability is in fact a congenital complaint. Most likely there were some small nodules or masses not bigger than a mustard seed or millet seed remaining from the time the fœtal cartilage of bone was undergoing development into true bone, and that this, instead of passing into true bone, became really the little spots which were ultimately to take on an abnormal development into cartilage. I am confirmed as to this opinion by finding small nodules in several parts; for instance, I find this piece filled with cartilage cells mixed with bone cells; and looking through it you can see that there are two pieces of the structure unlike the rest, which are filled with cartilage cells. It is then extremely likely that from a very early period, if not from the period of fœtal growth, there were spots there which have been developed into this cartilage. It is a disease of slow growth, a complaint which is usually painless; it causes inconvenience only by its unsightliness, and by its rendering the fingers and hands perfectly useless. It has no tendency whatever, ordinarily speaking, to affect the lymphatic glands. It does not therefore belong to the category of malignant disease which affects the lymphatic glands. When left to itself it may attain an enormous size; sometimes the size of a cocoa nut or child's head. At last it sometimes breaks, and the inside of the tumour softens down, and undergoes a kind of disintegration. A specimen here of another case of enchondroma exhibits a large cavity where it had softened and broken down. You see that this is a homogeneous structure throughout, and that there is no sign of breaking down or softening, but if it had gone on increasing in size it would have eventually broken down, and a cavity would have resulted. It was probably an examination of those large cavities which finally become cysts, that made this in former times be regarded as a cystic disease.

Progress of the Medical Sciences.

REPORT IN ANATOMY.

By EDWARD W. COLLINS, M.D., Univ. Dubl., Demonstrator of Anatomy, School of Physic, T.C.D.

ABDOMEN.

Retroperitoneal Pouches.—Retroperitoneal pouches have not received the acknowledgement in our anatomical text-books which their connexion with the pathogeny of retroperitoneal hernia demands. A very complete *résumé* of the subject has been published by Prof. Waldeyer (*Virchow's Archiv.*, 1874, Bd. 60, p. 66), to which the communication of G. L. Leeper (*Proc. Roy. Irish Acad.*, Jan. 1875, p. 79), may be regarded as a still more recent addition. The retroperitoneal pouches described—intersigmoid, duodeno-jejunal, subcœcal—differ as well in position as in frequency of occurrence and relationship to hernia. In adults the percentage of constancy is estimated by Waldeyer as intersigmoid 85%, duodeno-jejunal 73%, Treitz' subcœcal 30%—numbers which closely correspond with those of Treitz and Gruber.

Hensing's intersigmoid pouch, situated between the layers of the sigmoid meso-colon, is most constant. Its opening in the lower fold of the mesentery is generally slit-like, with the upper border projecting like a valve. In size it varies, usually admitting the tip of the index-finger only, though sometimes as many as three fingers. From its position in so movable a structure as the sigmoid meso-colon, it is liable to many alterations in form. Instead of a funnel-shaped pouch, it is not uncommon to find a canal ½ to 1 inch deep, or two such canals. The edges of the pouch are often very hard and thickened. The occurrence of hernia is prevented by the position of the opening. Treitz' view, which regards the mode of development of the pouch as intimately connected with the descent of the sexual gland, receives but partial acceptance by Waldeyer. Examinations at an early embryonic period point to its more direct connexion with the presence of two contiguous vascular systems, at the point from which the sigmoid flexure of the colon derives its peritoneal investment in its outgrowth from the abdominal wall. The spermatic vessels in the plica genito-enterica, and the superior hæmorrhoidal, occupy and determine the sites of reflection of the peritoneal folds, which form the outer and inner walls of the pouch.

Huschke's duodeno-jejunal pouch, though not quite so constant as the intersigmoid, is, in a practical point of view, by far the most important of the pouches, being that most frequently occupied by retro-peritoneal herniæ, more than forty instances of which at least are on record (Cf. *Lond. Med. Record*, 1874, p. 370). Its usual seat, at the junction of the duodenum with the jejunum, is limited externally by the duodeno-jejunal fold which is continuous with the descending meso-colon, internally and above by the inferior layer of the transverse meso-colon which invests the transverse duodenum. It is funnel-shaped, its blind extremity extending downwards on the left border of the duodenum between it and the aorta. Its opening above generally admits the tip of the finger, but may reach much larger dimensions. The peritoneal folds around the opening are readily seen if the first part of the

jejunum be drawn upwards and to the right. The pouch is sometimes divided into two, and there may even be another little pouch in front of it. Not unfrequently the pouch is quite obliterated. Gruber and Klob (*Virchow's Archiv.*, Bd. 44, p. 218) have recorded three instances of its occurrence on the right side, with a common mesentery for large and small intestine, in one of which a retroperitoneal hernia existed. Treitz has referred the development of the pouch directly to the decrease in size of the liver in the embryo, with the consequent alterations in position of the stomach and duodenum. The absolute fixation, however, of the lower end of the duodenum by the suspensory muscle, described by Treitz himself, and the flexible character of the intestine, is shown by Waldeyer to entirely negative such a supposition. The true solution of the problem is found in the study of the vascular relations of the pouch during embryonic life. The duodeno-jejunal fold, whenever present at this period, contains in its free margin the upper portion of the inferior mesenteric vein. Partly owing to its termination in the ultimate radicles of the portal vein, partly owing to its receiving the veins from the transverse meso-colon in front, the inferior mesenteric vein, as it passes behind the duodeno-jejunal junction, loses its former retro-peritoneal position, and arches forward, carrying with it the fold of peritoneum which forms the duodeno-jejunal pouch. No such pouch is formed when the inferior mesenteric vein continues to maintain a strictly retro-peritoneal course throughout; and deviations in form of the pouch are shown to correspond with deviations in course of the inferior mesenteric vein and left colic artery. In short, the inferior mesenteric vein always bears a similar relationship to the duodeno-jejunal fold as the umbilical vein to the falciform, and the hypogastric arteries to the umbilical. I have shown the fold and pouch of the pleura, which forms the rare special accessory lobe of the lung, to own a similar mode of origin in connexion with the azygos and superior intercostal veins (*Trans. Roy. Irish Acad.*, April 1874, p. 29). The fact of a duodeno-jejunal pouch being generally found in Gruber's cases of right duodeno-jejunal pouches points to some other explanation in those cases.

Four distinct retro-peritoneal pouches are connected with the cæcum, which differ much in their relative degrees of constancy and importance, the ileo-cæcal having the pre-eminence. The superior ileo-cæcal, as Waldeyer proposes to style the small pouch described by Luschka lying above the angle of the ileo-cæcal junction, is always well formed in embryos two to seven inches long; and in adults, though it is sometimes apparently absent, indications of its previous existence are always to be found. In the peritoneal fold which forms the superior limit of the pouch runs a twig of the ileo-colic artery. To it the fold which occasions the pouch manifestly owes its development. Hernia probably never occurs therein. The most remarkable and constant pouch near the cæcum, however, is undoubtedly that originally described by Huschke, better known as Luschka's ileo-cæcal recess, which Waldeyer now proposes to name more accurately as regards its relative position, inferior ileo-cæcal. It lies between Luschka's ileo-cæcal fold and the mesenteriolum, folds proceeding from the anterior and posterior parts of the lower border of the ileum near its termination, which meet close to the vermiform appendix. The mesenteriolum certainly owes its origin to the appendicular vessels it contains. The lax ileo-cæcal fold in front of it, which covers in the inferior ileo-cæcal angle, presents for examination but minute vessels, and, according to Luschka, some organic muscular fibres. Waldeyer therefore has much hesitation in regarding it as a vascular fold, formed like the mesenteriolum. The pouch, varying in depth from ¼ to 1¼ in., not unfrequently contains a cyst, and hernia has been once found therein.(1) Waldeyer has been unable to satisfy himself of any definite relationship between the pouch and the genito-enteric fold.

The true cæcal pouches are infinitely more inconstant than the ileo-cæcal. Leeper in his recent observations on the retro-cæcal has evidently been unaware of its identity with that described by Huschke, and subsequently by Trietz, Langer, Waldeyer, and Biesiadecki. It is bounded by a prominent sickle-shaped fold of the iliac fascia, extending outwards from the psoas muscle to the crest of the ileum. A branch of the anterior crural nerve may lie on the margin of the fascial fold forming its superficial edge. The peritoneum, raised loosely by the fascial fold, is involuted behind the fascia for a depth varying from ·7 to 1·9 in., so as to form a pouch, which remains open above, looking upwards. Huschke, Treitz, and Langer have found the pouch to contain the cæcum, Waldeyer the vermiform process. Waldeyer insists that the peritoneal fold which limits the pouch, Huschke's cæcal ligament, is always reflected from the posterior abdominal wall to the right side of the cæcum, and that the cæcum itself fits very accurately into the pouch. In Leeper's case, however, the cæcum had not descended nearly as far as usual, but lay loose in the lumbar region, with a meso-cæcum 4 in. broad which was continuous with the mesentery, the vermiform appendix lying within the meso-cæcum posterior and inferior to the cæcum, with no trace of a mesenteriolum. A subfascial iliac pouch, of similar formation, has also been found on the left side by Biesiadecki (Cf. *Lond. Med. Record*, 1873, p. 233), containing in several cases hernise of the descending colon. Trietz' subcæcal pouch Waldeyer regards as even more inconstant than the retro-cæcal, with which it is liable to be confounded. It lies deep under the cæcum, which must usually be drawn upwards in order to see it. Its opening, which is always directed downwards or to the left, from its very width usually prevents hernial intrusions. Hernia has, however, twice occurred therein (Cf. *Guy's Hosp. Rep.*, 1871, p. 137). In size it varies from a shallow depression to a sac extending upwards a finger's length between the layers of the ascending meso-colon. It is stated only to occur when the meso-cæcum is imperfect. Waldeyer cannot accept Trietz' conclusions regarding the influence of the genito-enteric fold on the development of the pouch, as he has always seen the fold in question lying beneath the end of the ileum. He finds a more probable explanation in the increased downward growth of the cæcum at a period when the ascending colon is already fixed by the outspread of its mesentery. This part of the subject needs further elucidation.

Liver.—C. Legros (*Journ. d'Anat. et Phys.*, March April 1874, p. 137) has examined the histological disposition of the minute bile-ducts. While the extra-lobular ducts are lined with a distinct columnar epithelium, which becomes less marked in the interlobular canals, the epithelial lining of the fine network of ducts within the lobule belongs to the squamous variety. The walls of the terminal intralobular plexus of bile-ducts are thus formed by thin flat cells placed in accurate juxtaposition. Each mesh of the network is small, and regularly polygonal, enclosing an hepatic cell. The capillary network is readily distinguished by its larger elongated meshes. The biliary passages are also much finer than the capillaries, and maintain the same calibre throughout the entire lobule. Legros regards the intralobular plexus of bile-ducts as forming a special reticulated gland, whose function is the production of bile; while to the hepatic cells, included

(1) Engel's case (*Weiner Med. Wochenschrift*, 1861, No. 10), Mr. Partridge's case (*Trans. Path. Soc. Lond.*, Vol. 12, p. 110), and Dr. T. E. Little's (*Trans. Path. Soc. Dubl.*, 1871, p. 281), are not included, as there the intestine had passed through a hole in the mesenteriolum.

within the meshes of the biliary network, he would refer more particularly the glycogenic function. G. Asp (*Ludwig's Arbeiten*, 1874, Vol. VIII., p. 124) confirms Legros, that the bile-ducts in penetrating the lobule lose their columnar epithelium, their walls being composed only of flat cells, disposed in spirals, with fusiform nuclei. He also finds that, as long as the interlobular bile-ducts are lined with columnar epithelium, they possess a striated extra-epithelial investment of several layers of connective tissue, consisting of fibrils and fusiform cells; so that the muscles which Heidenhain ascribes to these ducts do not exist. The striated investment is lost within the lobules. E. Fleische (Cf. *Lond. Med. Record*, 1874, p. 790) points out that lymph, besides passing by the known channels from the porta hepatis to the receptaculum chyli, also leaves the liver by lymphatics, which lie in the connective tissue around the large branches of the hepatic veins, and empty their contents into those of the diaphragm. His experiments go to prove that the bile, when its natural outlets are occluded, reaches the circulation indirectly through the lymphatics of the liver.

Urinary Organs.—Mr. Watson records (*Ed. Med. Journ.*, July 1874) a case of congenital absence of the right kidney and its duct, with malposition of that of the opposite side which was not enlarged; also a case of congenital atrophy of the right kidney and complete atrophy of the upper portion of its duct, with corresponding enlargement of that of the opposite side. Comparing them with eight similar cases, Watson concludes, that congenital deficiency or absence of one of the kidneys, while occurring with equal frequency on either side of the body, is more common in the male: that where the kidney is situated in the pelvis, the lobulated fœtal condition persists throughout life: that as a rule, when the kidney is absent, its ureter is absent also; that when a rudimentary kidney is present, its ureter may be developed with it, being deficient below; lastly, that a portion of the ureter may be developed with the bladder, being deficient above. In accordance with Valentin's view, which regards the ureter, its pelvis, and the uriniferous tubules as formed separately in a general blastema, Watson points out that, where this blastema is congenitally absent or incapable of further differentiation, we would have complete absence of both kidney and ureter; while where the blastema is present, one or other portions of it may proceed to greater development, the rest remaining stationary, and that thus the development of only a portion of the ureter may be accounted for.

Renal histology has received an important contribution from R. Heidenhain (*Schultze's Archiv.*, Vol. X., p. 1). While confirming the view of Isaacs (*Trans. New York Acad. of Med.*, 1857, Vol. I.), that the capsule and glomerulus of the Malpighian body are each provided with a separate epithelial covering, Heidenhain has thrown much new light on the structure of the epithelium lining the different portions of the uriniferous tubules. The epithelial cells of the convoluted tubules are not, as hitherto taught, simple but highly complex rod-like bodies. A large part of the protoplasm of each epithelial cell is broken up into a number of fine cylindrical rods, placed vertically on the basement membrane, and radiating through the structureless ground-substance in which they are imbedded. Thus the greater part of what was hitherto described as fine granular matter in the cells is nothing but the optical expression of the sum of the rods seen in section. The rods surround the nuclei, which are placed at regular intervals, and are sheathed with protoplasm which remains undifferentiated into rods. The epithelial cells of the broad ascending part of the looped tubules of Henle are in the main similar in structure. The remaining portions of the uriniferous tubules are not provided with rod-like epithelium. The comparative histology of the subject receives due consideration. Here it must suffice to state, that the rod-like cells reach their maximum of development in mammals as above, being limited in birds and amphibia to the broad ascending portion of the looped tubules. Similar epithelial cells have been discovered by Heidenhain in the finer parotid and submaxillary ducts, and in the acinous glands of the nasal mucous membrane; while he has proved their absence in the sublingual and lachrymal glands, the proper mucous glands of the mucous membranes, and the liver. A satisfactory explanation of their functions is not at present possible. The best preservative solution for histological examination of the cells is a neutral 5% solution of chromate of ammonium, after lying in which for twenty-four hours the specimen is transferred to alcohol. From experiments carried out by Chrzonszczewski's method of injecting a pure solution of indigo-sulphate of soda into the circulation, Heidenhain concludes that the Malpighian bodies take no part in the excretion of this salt. It is effected by the epithelial cells of the convoluted tubules, which possess a certain power of reducing the indigo solution. Single tubules may act quite independently of each other. The straight tubules act merely as ducts carrying away the secretion. The results thus obtained tend to confirm Bowman's view, that the Malpighian bodies secrete only the watery constituents of the urine with perhaps the salts of low atomic weight.

P. Langerhans *(l.c.)* agrees with Henle that the homologous glands of Cowper and Bartholin are racemose in structure—the acini lined by a single row of columnar cells, each containing a few granules and a nucleus lying close to the basement membrane: the excretory passages lined by smaller cubical cells, each with a large central nucleus, which become stratified in two or more layers in the larger ducts. Since the structure of the epithelial cells does not differ in adult from that in early life, Langerhans prefers with Henle to refer these glands to the urinary, rather than with Huguier *(Ann. des Sciences Nat.*, 1850, 239) to the sexual system.

Alimentary Canal.—As bearing on the subject of rod-like epithelium and its functions, it may be noted that Ludwig v. Thanhoffer (*Pfluger's Archiv.*, 1873, p. 391) regards the striated body of the intestinal columnar cells as due to the close approximation of minute rod-like processes, resembling hairs or cilia, which are directly connected with the protoplasm of the cells. They proceed from the contents of the cell, and are not due to the division or splitting up of the true cell border. Active movements ensue during the absorption of oleaginous particles. They are seized by the rod-like processes, which are then retracted; so that when the epithelial cell is gorged with fat, the striated body is no longer visible. Water arrests their movements; whereas bile, which stops the movements of ordinary ciliated epithelium, seems rather to excite these processes to activity. v. Thanhoffer confirms Heidenhain's view, that the attached extremity of each epithelial cell is prolonged by means of fine processes, rarely more than two in number, into a network of anastomosing connective tissue corpuscles in the matrix of the villus, which open into the lacteals, and thus form direct channels for the absorption of the chyle. v. Thanhoffer has also seen another delicate process proceeding from the nucleus of the epithelial cell to vesicularly nucleated granular cells, several times as large as the connective tissue corpuscles, which he regards as nerve cells. It is therefore not improbable that the columnar epithelial cells of the intestine can be directly influenced by the nervous system. Both longitudinal and transverse muscular fibres have been observed in the villi. Herbert Watney *(Centralblatt.* 1874, No. 48) has seen the connective tissue in the epithelium of the alimentary canal either forming a delicate reticulum with occa-

nuclei, lying under and between the epithelial cells and extending by processes to the free mucous surface, or else composed of round lymphatic cells. The intra-epithelial network is found in the pyloric glands and Lieberkuhn's crypts, the lymphatic cells chiefly in the pylorus, villi, and colon; while the epithelium covering the tonsils, lymphoid pharyngeal follicles, and Peyer's patches is infiltrated with a delicate reticulum of nucleated cells, the meshes of which contain lymphatic cells, and are directly continuous with the adenoid tissue of the underlying follicles. The lining endothelium of the lymph vessels is continuous with the reticulum, so that it may be said the endothelial plates of the former are only transformed connective tissue corpuscles of the latter. Watney's observations point to the conclusion that the fatty molecules do not, as Heidenhain and v. Thanhoffer hold, penetrate the epithelial cells themselves, but rather the intra-epithelial network, whence they pass into the network of the villi in communication therewith and so finally into the central lymphatic. Fatty molecules are absorbed in the same way, he holds, by the mucous surface of the pylorus, and generally by the glands of the stomach. The reticulum forms special sheaths for the unstriped muscular fibres and blood vessels which traverse it. In the papillary processes of the pylorus the blood vessels possess very vascular lymphatic sheaths, the walls of which are formed by connective tissue cells arranged like endothelial plates. Regarding the vascular relations of the villi, Heller (*Ludwig's Arbeiten*, Vol. VII.) shows that the description usually given—an arterial twig ascending to the point of the villus, and a venous stem descending, with a connecting capillary network—is incorrect. In man, the arterial twig commences to break up into a capillary network from the centre of the villus, the vein arising from the point of the villus, and passing into the submucous tissues, without receiving any lateral branches. This is thought to be of importance in connexion with the erection of the villus.

Prostate Gland.—A. Inversen has specially studied (*Nordiskt. Med. Archiv.*, 1874, Bd. 6, Nos. 6, 10, 20) some points in the anatomy of the prostate gland. He regards the misnamed middle lobe as merely an uniform commissure, rounded at its posterior border, connecting the two lateral portions of the gland. While usually entirely uniform and of the same thickness throughout, it is often thicker in the centre; yet, even then, there are no depressions separating it from the lateral portions. Sometimes there are two knot-like swellings at its posterior border with a smaller part between. The reverse—a tongue-like projection springing from the centre—is rarely seen. Inversen has only found it thrice. It looks like the uterus, but examination has always shown it to be solid throughout, and to have no connexion with the uterus masculinus. In old men the same condition is normally found, without any special disposition towards increased growth into the bladder. The elements of which the vesical portion of the gland is composed form a transition between the bladder and prostate. In the description of the prostatic portion of the urethra, special consideration is given to the pouch behind the colliculus seminalis, as from its position under the urethral orifice, and its anatomical relations with the portio intermedia, only too readily becoming the channel of false passages between the bladder and rectum. Inversen holds that the uterus masculinus and ejaculatory ducts throughout their entire extent are imbedded in a special cavernous tissue, which posteriorly is very distinct from the surrounding glandular tissue. The cavernous tissue is separated from the parenchyma of the gland by annular bundles of unstriped muscular fibres, areolar and elastic tissues, which extend underneath the entire of the colliculus seminalis. Underneath the opening of the ejaculatory ducts and uterus masculinus, this tissue forms a vertical septum, which passes into the crista urethræ above the colliculus seminalis. Many small septa pass from the sides of the crista towards its upper portion containing blood vessels between them. A very extensive erectile tissue is thus shown to immediately underlie the mucous membrane of a considerable tract of the prostatic portion of the urethra, most distinctly in connexion with its posterior, less evidently with its anterior wall. MM. Robin and Cadiat more recently (*Journ. d'Anat. et Phys.*, March 1875, p. 105), though making no mention of the special cavernous tissue found by Inversen, in other respects confirm his view regarding the structure of the tissues which surround the utriculus prostaticus and ejaculatory ducts. They add that they are lined by columnar epithelium, and contain no glands. With Svetlin, Inversen regards the glands of the prostate as belonging to the tubular not the racemose variety, and as occupying chiefly the sides of the portio intermedia, though sometimes found in the deepest part of the anterior commissure. Their racemose nature has, however, distinctly (*Virchow's Archiv.*, Aug. 1874, Bd. 61, p. 208) been affirmed by P. Langerhans. MM. Robin and Cadiat (*Journ. d'Anat. et Phys.*, Oct. 1874, p. 514) hold that the glands and even the follicles of the membranous and spongy portions of the urethra, having the same type as the prostatic acini, are the representatives of the elements of the prostate dissociated; while, on the other hand, the prostate is nothing more than a congeries of these elementary structures. The anterior commissure of the gland is muscular throughout, containing both striped and unstriped muscular fibres. The former springing from the anterior angle between the bladder and prostate form strong transverse bundles, and are auxiliary to the muscular fibres surrounding the membranous part of the urethra. Longitudinal bundles of muscular fibres lie next the mucous membrane in the anterior wall of the canal, and between these and the striped bundles transverse bundles. From the relative weights and measurements of the prostate at different periods of life, Inversen holds that the gland undergoes rapid development during the first period of puberty (15–20 years); attains nearly double its former size during the last period of puberty (20–25 years); continues then to increase very slowly till the fortieth year, after which it remains stationary with but slight fluctuations to an advanced period of life. These conclusions, arrived at from a retrospect of over 200 cases, abundantly confirm Sir H. Thompson's, that senile hypertrophy of the prostate is far more the exception than the rule. The epithelium of the glandular structure has been investigated by Langerhans (*l.c.*) with reference to the changes it undergoes in process of development. He finds no difference between the epithelium lining the terminal vesicles and their excretory passages. It is stratified in two layers, large superficial columnar cells granular throughout, varying somewhat in size, and being prolonged by one or two processes, springing from their deep nucleated portion, between the small round non-granular cells of the deep layer, which each contain a large nucleus. The underlying connective tissue appears perforated with spaces occupied by the basal prolongations of the superficial epithelial cells, and cannot therefore be regarded as a distinct basement membrane. Previous to puberty, the spaces between the lower cells are larger, while the upper cells are relatively much smaller in size, chiefly at the expense of their supra-nuclear portion, and some large yellow granules, which are found near the nucleus in adult life, are wanting. The epithelium maintains the same disposition and structure in other respects at all periods of life. Langerhans holds that the prostate is thus the only racemose gland whose epithelium is stratified in two layers; besides in such glands there usually exists

a marked difference between the epithelial lining of the acini and excretory passages. Inversen regards the prostatic calculi of advanced life as simply aggregations of smaller concretions, themselves formed by masses of the yellowish microscopic sand of the epithelial cells. Chemical reagents throw little light on the nature of this supposed amyloid sand. The concretions undergo changes in time, owing to the addition of inorganic matter, chiefly phosphate of lime with some magnesia soda and potash, deposited from the mucus secreted by the irritated mucous membrane. Their analogy with bronchial and tonsillitic concretions is thus suggested. Langerhans shows that these formations take place at the expense of the epithelial elements.

Testes and their excretory apparatus.—Langerhans *(l.c.)* has also studied the histological changes in the epithelium of the vas deferens and vesiculæ seminales at various periods of life as indicating their sexual development. These passages in infants are lined with a stratified epithelium varying in height and of many layers, the cells, though finely granular, not containing coarse granules or pigment. The most superficial present a fine glistening cuticle, or rod-border, as Klein has indicated *(Stricker*, p. 635), next the lumen of the tube. At puberty the epithelial cells vary somewhat more in height, the cuticle-border has disappeared and is replaced by small granules. In adults the cells are larger and much broader, though somewhat diminished in height. At this period they are stratified in two distinct layers, small round cells with large nuclei underlying large columnar cells with long nuclei and basal processes which pass between the round cells into the subjacent connective tissue, those of the vas deferens now containing coarse granules above their nuclei, those of its ampulla and the vesicula seminalis characteristic pigment granules. They gradually diminish in size from the lower end of the vas deferens in its ampulla and the vesicula seminalis. The marked difference, which exists between the epithelial cells of the ridges and depressions of the ampulla, is not found in the vesicula seminalis. Large cells are seen among the epithelial cells throughout at all periods of life, but they attain their maximum of development in adults in the ampulla and vesicula seminalis. Langerhans points to the fact that only one other epithelium, the germinal, presents a similar condition; and the embryonic region, from which the germinal epithelium and the Wolffian bodies take their origin, has been shown by Roniti *(Schultze's Archiv.*, X. 206) to be the same. The possession of germinal epithelium by the Wolffian bodies and their later derivatives may be thus satisfactorily explained. The epithelium of the canal of the epididymis is essentially the same as that of the vas deferens, save that the columnar cells are ciliated.

V. von Mihalkovics minutely discusses the anatomy of the testis (Cf. *Lond. Med. Record*, 1874, p. 321). The convoluted seminal tubules form a network by dividing dichotomously, the terminal branches being connected by loops without any bud-like dilatations of their walls. The straight tubules are not simply prolongations of the convoluted, but excretory tubules, which lie in the tissue of the corpus Highmorianum and the lower end of the septa. They are considerably narrower than the convoluted, and are lined by a low columnar epithelium. Interstitial cells are constituents of the testis, as of the coccygeal and intercarotic glands and corpus luteum. The connective tissue consists of bundles which form networks, enveloped by endothelial cells. The origin of the lymph-vessels is in the spaces between the endothelially invested bundles of connective tissue, and partly in the spaces of the lamellæ of the walls of the seminal tubules. The epididymis, besides acting as the excretory tube, is also the place for the secretion of the fluid constituents of the semen. Its blood vessels form a dense capillary network immediately under the epithelium, presenting a striking resemblance to the vascular arrangement in the ovarian follicles. Ed. v. Beneden asserts (Cf. *Quart. Microscop. Journ.*, Jan. 1875, p. 81) that, while it has hitherto been almost universally admitted that the testis and ovary spring from the same embryonic organ, which subsequently becomes differentiated with the advance of growth, his own researches among zoophytes have convinced him that the axiom of the identity of the two sexual glands has no scientific basis. He commits himself to the important generalization, that throughout the animal kingdom the testis in its origin is ectodermal, the ovary endodermal: that the epiblast of the embryo may hence be regarded as neuromuscular and male, the hypoblast alimentary vegetative and female. In vertebrata Waldeyer has shown that the Wolffian ducts, from which the testis is formed, are derived from the ectoderm by the intermediation of the axial cord; while the superficial epithelium of the ovary, from which the ovary is formed, is only a part of the peritoneal epithelium itself derived from the middle layer of Remak, which with the inner layer is now regarded by many as constituting the endoderm. v. Beneden's conclusions thus receive confirmation in vertebrata.

Reviews.

Clinical Lectures on the Diseases Peculiar to Women. By Lombe Atthill, M.D. Dublin: Fannin and Co. 1875: Pp. 294.

It gives us great pleasure to welcome a third edition of this book, the second having been now for some time out of print. Though it does not profess to be a complete systematical treatise on the subject, in it will be found a short and accurate account of those diseases of women most frequently met with in general practice, with precise and very positive directions as to the best method, in the author's opinion, of treating each. This latter quality of the book, if we may so call it, seems to us one of its chief attractions. For nothing is more confusing or discouraging to the student or practitioner, than, on referring to a book for directions as to the best means of treating a certain disease, to find nothing definite or positive on the subject; every possible or impossible treatment that has ever been recommended being huddled together, and no hint given as to which is considered the best. The book now before us cannot be classed in this category, for the author throughout speaks as one having authority, and who is thoroughly convinced that the treatment recommended is the very best that is known; and though we may not always agree with him, we are certainly never at a loss to find out where we differ.

In the present edition the author has re-written and greatly improved the chapter on Endo-metritis. In the last edition he stated that he could not remember having met this disease in an unmarried woman; since then he has seen well-marked examples of it in virgins. Two new chapters on "Uterine Therapeutics" have been added, which are perhaps the most thoroughly practical part of the whole book. In these the author gives precise directions for carrying out what may be called the details of treatment. He advocates the use of cold water, either in the form of the hip bath, or by means of Chapman's spinal ice bags, in some cases of amenorrhœa. We would have been glad if the cases in which this treatment was found most beneficial had been given more in detail. The author also gives short rules to guide us in the administration of ergot, quinine, strychnia, and arsenic, which he is satisfied are the only

drugs that have any direct action on the uterus. We are glad to find that in the present edition, the statement, that the sea-tangle tent is perfectly harmless, has been omitted, as we have ourselves seen its use followed by fatal peritonitis.

In speaking of the differential diagnosis of fibrous tumour from pregnancy, the author says, that the *bruit de soufflet* often heard in cases of fibrous tumour, may be mistaken by the careless observer for the placental murmur. We feel sure that this latter term must have been used through inadvertence, as we think it is now universally admitted that the sound to which this term is applied has its origin in the uterine sinuses, and is often heard loudest at a point far distant from the insertion of the placenta. Another and more important point is that Dr. Atthill gives the differential diagnosis between these two murmurs, in the following words (p. 144) "but the former (the soufflet heard in cases of fibrous tumour), is always synchronous with the pulse, and can generally be increased by pressure." This can mean nothing except, that what the author calls the placental murmur, is not synchronous with the maternal pulse: a statement which we feel confident he did not intend to make, and which we would not now notice, except that it has been allowed to slip without correction into this edition from the second one.

Space prevents us from enumerating all the really good points of the book; but we can recommend it most strongly to all students or practitioners who wish to gain a good practical knowledge of the special class of cases treated of, without the expenditure of time and money entailed in becoming acquainted with the general literature on the subject.

Correspondence.

BERLIN.

FROM OUR OWN CORRESPONDENT.

The Appointment of Public Registrars for Berlin—Returns for January—Effect of Temperature on the Amount of Disease—The New Drainage Scheme—The New Laboratory—New Hospital at Friedrichshain.

In one of my former letters, I mentioned the official returns on which we are dependent for anything like a general survey of the sanitary condition of Berlin. These returns have become much more complete since the recent appointment of a number of public registrars (Standesämter) throughout the city, at whose offices all particulars concerning the births, deaths, and marriages, that take place in Berlin, have to be lodged. The number of these officers is thirteen, one for each division of the city, and each is bound to send in a weekly return to the Central Statistical Bureau. The material thus obtained is worked up under different headings, and published monthly in the form of a pamphlet, with a short explanatory preface, under the title "Report of the Central Statistical Bureau of Berlin." In the Report for January, which now lies before me, the information thus obtained is arranged under the following headings:—

1. Marriages.
2. Deaths reported to the Registrars, arranged according to the age of the deceased, hour of death, whether married or single, widow or widower, separated, &c., religion, profession or occupation, number of illegitimate children.
3. Children born living.
4. Children stillborn. The last two sections being again subdivided.
5. The death-rate, as definitely determined by the Central Statistical Bureau from the Registrars' returns and those furnished by the Police. All the deaths thus obtained are arranged according to the age of the deceased, and the cause of death. The causes of death are divided into eight large classes, viz:—1. Infectious diseases; 2. Zoonomen; 3. Poisoning; 4. Parasites; 5. External causes; 6. Interference with nutrition or development; 7. Organic diseases; 8. Cause unknown or undetermined. These groups are again divided; thus, the first class, or infectious diseases, is subdivided into measles, small-pox, scarlatina, erysipelas, diphtheria, pyæmia, puerperal fever, carbuncle, typhoid and typhus fevers, dysentery, cholera, &c. The total number of sub-divisions being ninety.

In this way we obtain a very thorough and satisfactory view of the fluctuations in the mortality due to diffent diseases. This classification originated with Virchow, which is quite sufficient to ensure its being equal to any demands that may be put upon it. It would tend greatly to make the monthly report more forcible and striking, if to it were added some graphical illustration of the results that are obtained, and I shall do my best to have the idea carried out. Next follow the tables which have already been mentioned, of the amount of sickness observed among those of the poorer classes who are treated, at the public expense, in their own homes; the amount of surface water; the state of the weather, and the temperature.

Thus, in the month of January the total number of deaths that were returned was 2,075, being 73 in excess of those registered in January of the previous year. Of this number 56·9 per cent. were men, and 43·1 per cent. women; 34·5 per cent. occurred in children under one year, and 52 per cent. in children under five years of age. Between the ages of 65 and 70 the greater number of deaths occurred among males—above that age in females, this latter being due to the fact that there are more females than males who live to that age. In like manner the number of deaths among widows exceeded those among widowers by about 2 per cent., which corresponds to the excess of widows over widowers. More deaths (54·4 per cent.) took place between twelve o'clock at night and twelve o'clock in the day, than between noon and midnight (44 per cent.) The most fatal period in the twenty-four hours was just after sunrise. The increased mortality at the beginning of the year must in a great measure be ascribed to the sudden and frequent changes of temperature. The suddeness and extent of these changes were more marked this year than usual. Thus, for instance, the temperature rose between January 2nd and January 3rd from 14° to 35° Fahr., and fell between January 20th and January 21st from 49° to 36°, and on the day following to 32°. As a consequence of this the deaths from diphtheria, croup, and tubercle, on Jan. 2nd were increased by thirteen, and on Jan. 21st by fifteen. However, with but few exceptions, tubercle proved most fatal on warm, moist days, when the wind was south or south-west. On such days the mortality from this disease rose to nearly double the average. During January there were many exceptions to the rule, that the death-rate varies inversely as the temperature; this mutual relation was, however, plainly discernible during February, the days on which the mortality was greatest being the 14th, 18th, and 24th, with 91, 84, and 82 deaths respectively, the corresponding fall in the thermometer being 10°·57, 4°·56, and 2°·7 Fahr. It would be most interesting to carry out these observations further, and see how the prevalence of each disease is affected by the change of temperature. We have, on the whole, been this year wonderfully free from anything like epidemic disease. Diphtheria alone has been more rife than usual, and it has hardly overstepped the usual average for the early part of the year. It proved most fatal between

the 14th and 20th of February, during which period it was credited with thirty-two deaths out of a total of 512. Out of 2,088 deaths that took place during that month, it was returned as being the cause of death in 114 cases, or 5·4 per cent. Of all the acute diseases Pneumonia was the most fatal, the mortality from it alone being 7·2 per cent.

You may thus perceive that we have ample material for determining a death-curve for Berlin, and the energy displayed by our Statistical Bureau makes it quite certain that all such material will undergo a searching analysis. We are not so fortunate as to the means at our disposal for determining the amount of sickness, being still entirely dependent on the scanty returns of those Doctors whose duty it is to visit the sick poor in their own homes. A pretty fair guess can, however, be made as to the prevalence of any disease, from a careful consideration of the mortality returns, with which we must, for the present at least, be contented.

The drainage of the city is making satisfactory progress, due in a great measure to the fine, dry weather we have had during the month of January. A large proportion of the sewers in the South-western quarter of the city are already completed. I have been unable to obtain any information as to the effect of the excavations in increasing the amount of typhoid or intermittent fever among the workmen employed, or among the inhabitants of those streets through which the sewers run.

What is of greater interest from a purely medical point of view is, that the splendid new Laboratory built for Professors Helmholtz, DuBois-Reymond, and Liebreich, is very nearly completed, and we will therefore soon be on an equality in this respect with other German University towns. We owe this to a certain extent, no doubt, to a feeling of rivalry with our near neighbour the University of Leipsic, which has induced the Government to hearken more to the claims made by us on behalf of science, than heretofore. There is also at present a report abroad that Langenbeck's Surgical Clinique, the condition of which any of your countrymen who have visited it must remember with sorrow, is to give place to a new and more suitable building.

The new Hospital in Friedrichshain is almost quite full, which has caused a considerable diminution in the number of patients admitted into the Charité. The ventilation and heating apparatus have been thoroughly tested, and give universal satisfaction. I intend soon to give you an accurate description of this Hospital, and will at present content myself by mentioning that the openings for fresh air, which is heated by means of hot water pipes, are situated both along the walls at a short distance from the level of the floor, and also in the middle of the rooms; and that the foul air escapes through pipes arranged around the flue of the large stove. Up to the present the Doctors there have had no reason to complain of the presence of erysipelas, puerperal fever, or pyæmia. This would seem to give the lie to those sceptics who maintain, with Freiherr von Diergardt, our great authority on Hospital building, that the only possible way of ensuring ventilation, is by making it impossible to shut either windows or doors.

I must defer some interesting casuistical medical items till my next letter.

DR. C. A. EWALD,
Charité, Berlin.

LOCAL ANÆSTHESIA may, it is said, be obtained by rubbing for a minute the part upon which it is desired to operate, with a mixture of powdered camphor, ʒiiss, and sulphuric ether, ʒv.—*Le Progrès Méd.*

Extracts from Journals.

THE SPLEEN IN RELAPSING FEVER.—In the last number of the GAZETTE, we published (p. 105), from the *Centralblatt*, an abstract of M. Laptachinski's researches on the blood in relapsing fever. One of the conclusions arrived at by that observer was, as stated by us (*loco cit.*) "that with each attack of fever a discharge of the spleen contents into the blood takes place in this disease." Our attention has been kindly directed to the fact that a very similar observation has been made by one of the ornaments of our Dublin School, Dr. Hudson, who, in his *Lectures on the Study of Fever*, published in 1867, a new edition of which was recently issued,(1) says, when speaking of the abdominal lesions of fever:—"During the epidemic of relapsing fever of 1848-9, I so frequently observed this condition of the spleen (congestion and enlargement), existing after the crisis, and followed by relapse, that I was led to connect them, and to regard the relapse as probably due to the re-absorption of depraved blood which had lain by, as it were, in this organ, and so had not shared in the depuration of the circulating mass during crisis." A somewhat similar observation, Dr. Hudson remarks, was made by Dr. Henderson in the *Edinburgh Med. and Surg. Journal*, Vol. LXI.

ANEURISM OF THE EXTERNAL CAROTID CURED BY DIGITAL COMPRESSION.—In a paper communicated to the *Societé de Médecine Pratique*, by Dr. J. A. Marques, of Lisbon (*La France Médicale*, No. 19, p. 149), an account is given of the cure of an aneurism of the right external carotid artery, by digital compression. It was the first time that compression on the carotid had been tried in Portugal. The patient was aged 30, and had had rheumatism. A year before admission he had intermitting pains in the right ear, and in August, '74, he consulted a physician at his place of residence in Bahia. An aneurism was diagnosed, and on the 3rd September digital compression was commenced on the common carotid. For the first ten days pressure was made for five hours daily, and for ten or twelve hours in the twenty-five following days. Ice was applied to the tumour, and the patient took digitaline and hydrate of chloral. At the end of that time the tumour was very hard, somewhat smaller, but it still pulsated; and the patient, now discouraged, left for Lisbon. The tumour was there diagnosed as a false consecutive aneurism, and compression was commenced on the 21st November. Ice was applied over the tumour. On the 1st of January, 1875, the cure was complete, the compression having been applied for 283 hours during forty days of treatment. W. T.

INJECTIONS OF COLD WATER IN TYPHOID FEVER.—Dr. Foltz, of Lyons, advocates lavements of cold water in typhoid fever. After numerous observations he concludes, that such lavements have both a local and a general action; the local action being an agreeable sensation of coolness, accompanied with intestinal contractions; and the general action producing slackening of the pulse rate and notable diminution of temperature, as well as calming the nervous system, decreasing thirst, exciting appetite, and increasing the secretions. This refreshing sedative and tonic action follows in all instances in which the temperature of the lavement is under 38°. C. (100°. F.), but is more intense and durable according to decrease of temperature and frequency of repetition. The therapeutic indications for such lavements are very numerous. Their local action renders them useful in abdominal affections, and their general action in febrile maladies. Both these actions render their use applicable in typhoid fever.—*Lyon Médical.* D. F. B.

(1) Reviewed in Vol. I. of IRISH HOSP. GAZ., p. 41.

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, April 10th, 1875.

HENRY KENNEDY, M.B.,
Vice-President, in the Chair.

Mitral Stenosis and Tricuspid Regurgitation.

DR. QUINLAN exhibited the heart of a young woman, aged 17, who had been admitted into Hospital ten days previously, complaining of difficulty of breathing. The most prominent symptom was strongly marked pulsation in the veins of the neck, which was synchronous with the systole of the ventricles. The pulse—a sphygmographic tracing of which was exhibited—was feeble. There was no congestion of the lungs. A diagnosis of mitral contraction and tricuspid regurgitation was made, but no presystolic murmur could be detected at any time. On the evening of the 5th inst., the patient, who had expressed herself as feeling better, got out of bed to go to the night-chair, when suddenly she fell down dead. On *post mortem* examination, the sac of the pericardium was found to contain above 12 ounces of serum. The apex of the heart was slightly bifid and equally formed by both ventricles. The aorta was diminished in size. The right ventricle contained a large, fleshy embolus, which was entangled in the tricuspid valves. The tricuspid orifice was about twice its normal size, and its valves were studded with warty vegetations. The mitral orifice was so contracted that it would not admit the tip of the little finger. The opening was of a crescentic shape, and the walls of the ventricle were greatly hypertrophied. The left auricle was also hypertrophied. There was no appearance of fatty degeneration.

Impacted Fracture of Neck of Femur.

Prof. BENNETT exhibited a specimen of that rare form of extracapsular fracture, in which the lower fragment is impacted into the upper one. There was no history connected with the specimen, and the nature of the injury was only identified, as can alone be done in such fractures, by a section which was made with a view of determining another question. The most striking feature connected with this form of fracture was, as Prof. Bennett observed, that while the angle which the head of the bone forms with the neck was almost normal, the level of the summit of the head of the bone was depressed below the level of the trochanters. There was slight rotation of the head backwards, and on examination of the surface the existence of a detachment of the lesser trochanter was indicated. On inspection of the section of the bone it was remarked that at the upper part of the section the traces of the injury were obliterated. At the lower portion, the two pieces of compact tissue overlapped each other to the extent of ¾ inch. Prof. Bennett said that there were only three or four cases of this variety of fracture recorded. The drawing in the late Prof. Smith's work on fractures was taken from a specimen in the Museum of Dr. Steevens' Hospital. There was another specimen which Prof. Bennett had seen in the Museum of the Surgeons' Hall at Edinburgh.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, March 13th, 1875.

LOMBE ATTHILL, M.D.,
President, in the Chair.*

On Protracted Labour—Hourglass Contraction—Hæmorrhage, and the Introduction of the Hand into the Uterus.

Dr. S. NICOLLS, of Longford, read a paper detailing the result of his experience in midwifery practice. He regards suspension of labour as caused by the head pressing the cervix uteri on the arch of the pubis, and thus preventing the descent of the uterus and expansion of the os. After a time the waters commenced to escape, and the uterus, unable to contract from the fundus downwards, contracted circularly on the fœtus, and moulded itself on the body of the child. His practice now is to ascertain if the uterus retains its globular form, and if so, wait, and let nature take her course; but if the uterus be elongated, and pains unavailing, he gives an opiate draught, commences to dilate the os, and soon is able to apply the long forceps and deliver the child, having previously given a full dose of ergot to ensure good contraction. When the funis is divided, he introduces the hand promptly, removes the placenta, and applies the binder. He advises to keep the patient low, and to give no oil or other purgative. He has found that women who get food and purgatives are liable to have the milk and other secretions interrupted, and sore breast and peritonitis to follow. He is so satisfied of the advantage of promptly introducing the hand, and removing the placenta, that he invariably resorts to it.

Dr. DARBY did not approve of the application of the forceps before the os was well dilated, except under urgent necessity, nor of keeping parturient women low.

Dr. M'CLINTOCK characterized Dr. Nicolls as being in advance of the most advanced obstetric innovators, and expressed his regret that he had not favoured the Society with any statistics of the results of his most extraordinary practice.

The PRESIDENT said that Dr. Nicolls must be the first Irish Practitioner that ever used the long forceps. He warned young practitioners against rashly applying the forceps before the os was dilated.

Dr. KIDD protested against the practice inculcated in the paper as being most dangerous.

Dr. NICOLLS, in reply, said his practice was not recent, but adopted forty years ago.

* *Concluded from last Number.*

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, March 24th, 1875.

J. F. DUNCAN, M.D., President, in the Chair.

Scarlet Fever.

DR. GORDON opened the adjourned discussion on Drs. James Little's and Foot's papers on this subject,(1) by bringing forward some statistical information as to the prevalence of the disease in the Hardwicke Hospital during past years, and as to the chief features of the present epidemic. From the years ending March 31st, 1861, to March 31st, 1875, 901 cases of scarlet fever had been admitted into the Hardwicke Hospital, 127 of which had proved fatal (= 14%). From 31st March, 1870, to the same date in 1871, the admissions were 109; in 1871–72, 84; in 1872–73, 12 ditto, and 3 fatal cases; in 1873–74, 64 ditto, and 17 fatal cases; and in 1874–75, 167 admissions and 33 deaths. The greatest mortality was amongst infants up to five years of age. In the last two years there were 34 admissions of patients under five years of age, and 14 deaths. Most of these cases were from the Workhouse, and poor neighbourhoods, and only survived admission a very short time. Some were admitted in collapse and made no rally, the eruption in these cases being patchy and not general. During this period (the last two years), there had been 35 admissions of

(1) *Vide* p. 109.

patients between the ages of 20 and 40, with 8 deaths. Two or three of the fatal cases were policemen, who died in the first stage of the disease. Seven cases had been admitted in which the disease accompanied the puerperal condition, and six of these proved fatal. The case which recovered had severe nervous symptoms, and her convalescence was retarded by the formation of an immense gluteal abscess. Brawny swelling of the neck was generally a fatal complication. In those cases in which the swelling came on suddenly, Dr. Gordon had found a few small doses of mercury—grey powder with Dover's powder—as recommended by Sir Dominic Corrigan, useful. Fomentations and poultices, and wine and broths were also necessary; and, if possible, Dr. Gordon preferred to allow abscesses to open of themselves.

Dr. FITZPATRICK said that the epidemic of 1841 presented purely inflammatory characteristics. At that time he wrote a paper recommending the exhibition of alterative doses of mercury; but a totally different phase of the disease appeared the next year, which obliged him to give up mercury. Scarlet fever should be viewed in three aspects:—1st, As to the amount of poison in the system; 2nd, the power of resistance of the patient; and 3rd, the means of combating the poison. He thought that mercury had some value in cases exhibiting marked inflammatory symptoms. He did not apply astringents to the throat, but a linctus of solution of chlorinated lime and honey.

Dr. DARBY remarked that different epidemics presented different features. The present epidemic was a mild one, there was no tendency in it to suppuration, but dropsy was a frequent complication. In these cases tartar emetic, in small doses, seemed a very successful mode of treatment. Rheumatism was now also frequent. Eight out of nine cases of brawny swelling of the neck died in 1843.

Dr. DOYLE gave his experience of the present epidemic as he had seen it at Baldoyle, principally among the poor, who were in that neighbourhood, very badly situated hygienically. In many cases there was no rash. Patients in whom there was a conbination of inflammation of the cellular tissue of the neck and sore throat died. He had observed renal congestion during the second stage of the disease. It was remarkable that patients under the worst sanitary conditions often recovered, and that although there was constant communication between Howth and Boldoyle, there was not a single case of scarlet fever in the former locality. Stimulants were found of benefit.

Dr. HENRY KENNEDY spoke of the epidemic of 1840, which was a more severe one than the present; sloughing of the neck was at that time very common and extensive. One case Dr. Kennedy alluded to in which the entire clavicle had come away, yet the patient recovered. In 1840 a secondary fever, analogous to that of small-pox, was common. The most striking feature of the present epidemic was the prevalence of dropsy and hæmaturia, and rheumatism. Dr. Kennedy had seen all the cases of puerperal scarlatina which had occurred in the Rotunda, and was of opinion that all the patients had the disease when admitted to that Hospital, and that immediately after delivery it became developed. As to treatment, Dr. Kennedy recommended the use of a diluted solution of sulphurous acid, to be applied with an elastic bag, for the purpose of cleansing the nares and throat. Chlorate of potash and tincture of the perchloride of iron, were, he considered, beneficial; part of the remedial effect of the latter might be due to the acid which entered into its composition. The remedy, however, upon which Dr. Kennedy placed most reliance, and which was not as well known as it deserved to be, was barm. It might be said to have a specific effect; a pint might be taken in the twenty-four hours.

The PRESIDENT deprecated degenerating into a system of routine in the treatment of any epidemic, and spoke of the practice of venesection, &c., in scarlatina in former years. The almost constant occurrence of dropsy was a feature of the present epidemic.

Dr. POLLOCK said that his experience, as a Dispensary Medical Officer, was that epidemics commenced among the poor. He did not approve of caustic applications to the throat in scarlatina, but recommended constant washing out with plain water.

Dr. SIGERSON said that the French school recognized different forms of scarlet fever, viz., the inflammatory, nervous, typhoid, and hæmorrhagic forms. Affusion of cold water was in many cases attended with success. The source of blood in the urine, when it was hæmorrhagic, required discrimination.

Dr. GORDON observed that he attributed recovery in some of the worst cases he had had, to the employment of cold affusion.

Dr. PEELE had also observed the frequency of dropsy in the present epidemic. The sanitary condition of the house or locality had always, in his experience, a remarkable influence for the worst on the disease. Cases in which the brawny swelling of the neck occurred were fatal. He had seen several cases of scarlatinal rheumatism, and had successfully treated it with iodide of potassium.

Dr. J. LITTLE, in replying to some observations that had been made on his paper, remarked that he did not think iron had any influence on the disease, as, for instance, it had in erysipelas, and that for the last two years he had, therefore, not given it in scarlet fever. Chlorate of potash, he thought, was liable to give rise to diarrhœa. He had seen renal mischief occur in some cases in which the patients had not left their beds. Puerperal scarlatina, which had been alluded to, was a loose term, and he would ask—Is this disease really scarlatina? and does it spread? He believed it to be due to blood-poisoning, and similar to what Sir J. Paget had termed surgical scarlatina.

Dr. FOOT, in his reply, said that he confined the local application of nitrate of silver to cases of catarrhal inflammation of the tonsils solely, and that he intended it as a sedative, not as an astringent, to relieve the annoying spasm. For this purpose the solution must be at least of the strength of gr. xxx to the ounce.

SURGICAL SOCIETY OF IRELAND.

Friday, 19th March, 1875.

JOLLIFE TUFFNELL,

President, R.C.S.I., in the chair.

Removal of a Foreign Body from the Pharynx by Pharyngotomy.

MR. W. J. WHEELER detailed a successful case of removal of a foreign body impacted in the pharynx by the operation of pharyngotomy, performed, for the first time in this country, by him in the City of Dublin Hospital. He remarked that the majority of surgical writers say little or nothing of pharyngotomy, and appear to confound the operation with œsophagotomy. Foreign substances when extracted otherwise than by the mouth have almost in every case been removed by œsophagotomy, and no account is given of the performance of pharyngotomy before the cases graphically detailed by Mr. Cock in *Guy's Hospital Reports*. The steps of the two operations are different, the same structures are not engaged, the parts to be avoided are not similarly situated, and there is not the same readiness in getting at the pharynx as at the œsophagus. The difficulty of pharyngotomy is increased also by the much greater proximity of the common carotid, the danger of wounding the thyroid gland, the almost absolute necessity of dividing the insertion of the omo-hyoid

muscle, and the danger of wounding the inferior thyroid artery. The case in which he operated was that of a man aged 45 years, in robust health, who had accidentally swallowed a needle. The patient endeavoured to withdraw it by pulling at a thread which hung from it, but as it had slipped down eye foremost it became impacted. The laryngoscope showed the needle somewhat obliquely situated, with its eye buried in the left palato-pharyngeus muscle, and its point in the left arytenoid cartilage. On endeavouring to extract it with the forceps it appeared to slip through the blades. Similar attempts next day with different kinds of forceps proved unavailing, and the patient suffered so much laryngeal distress that he was allowed rest three or four days, after which is was found so firmly imbedded that all attempts to depress or dislodge one end of the needle were unsuccessful. As the patient then became pale, thin, and haggard looking, continued unable to swallow solid food, and occasionally suffered considerable pain, which prevented sleep, it was determined, after due deliberation, to romove it by pharyngotomy. The patient having been put under the influence of chloroform, Mr. Wheeler made an incision on the left side of the neck from the body of the os-hyoides to the superior margin of the cricoid cartilage, through the integument and fascia. A small vessel, probably the sterno mastoid branch of the superior thyroid artery, required to be ligatured. The layers of fascia were taken up and cautiously divided on a director, until the common external and internal carotid arteries, the superior thyroid body, and superior laryngeal nerve, with some descending filaments of the ninth nerve, were exposed to view. The attachment of the omohyoid muscle was then separated, and the chloroform discontinued. A staff passed into the mouth was caused to bulge in the left side of the pharynx, and an incision sufficient to admit the top of the index finger made down on it. The staff being removed, the opening was enlarged upwards and downwards, and a finger passed behind the ala of the thyroid cartilage, but the needle could not be felt. A small forceps was next passed in on the palmar aspect of the left index finger, but it did not catch the needle. Mr. Wheeler then passed his forefinger upwards towards the mouth, and brought the thread from the mouth through the wound. On following the course of the thread he found the needle imbedded in the soft structures, and had to scrape with his nail until he came upon it, whereupon by slight traction on the thread and grasping the needle with the forceps the foreign body was removed. During the operation the patient suffered great dyspnœa, the face was congested, the eyes protruded, and perspiration poured off his face. No sutures were put in the gullet; the edges of the wound were approximated with carbolic sutures, and lint soaked in carbolic oil was laid over the wound. A bread and milk poultice was placed over the abdomen, and renewed in four hours; nutritive enemata were given, and a sponge soaked in iced milk was occasionally squeezed into the mouth or given in teaspoonfuls, and though some came out through the wound the greater part followed the natural course. The second day after operation the edges of the wound were slightly inflamed, and an abscess in the vicinity discharged through it as the edges had not, in anticipation of such result, been drawn together. After eleven days fluid ceased to come through the wound, and the patient was discharged cured after the lapse of a further fortnight. Mr. Wheeler directs attention in the performance of such an operation to the immediate arrest of hæmorrhage from the small vessels neccssarily divided, so that none of the parts may be obscured; to having the vessels well retracted; to having a staff put into the pharynx from the mouth; not to pass a knife into the pharynx to enlarge the opening up and down, as recommended by Mr. Cock, and so avoid producing hoarseness and wounding the filaments of the nerves; not to mistake the thyroid gland for the gullet; and to operate on the left side as being more convenient than the right, unless contra-indicated by position and size.

Some Peculiar Symptoms Connected with Obstructions of the Lacrymal Puncta Canaliculi and Nasal Canals.

Dr. C. E. FITZGERALD drew attention to the desirability of careful examination of the lacrymal passages in the various forms of ophthalmia. This is not at all fully treated of in any standard English work on ophthalmology, and he believes in no foreign text-book except Galezowski's treatise on diseases of the eye. That author states that even slight obstructions of the lacrymal passages are frequently accompanied by symptoms which may assume a grave aspect. Dr. Fitzgerald's experience confirms this assertion, and convinces him that these symptoms have hitherto been ascribed either to the special affections they simulate or to some general constitutional disturbance, or the patient has been regarded as a hypochondriac. According to Galezowski these obstructions may produce a special form of conjunctivitis, termed by him lacrymal conjunctivitis, characterized by its gradual and insidious invasion, and a peculiar vesicular eruption on the palpebral conjunctiva. Suppurative keratitis and blepharitis may be a further consequence. The most remarkable consequence, however, is the appearance of a train of symptoms exactly resembling those which mark the presence of asthenopia, viz., inability to use the eyes for any close work, such as reading or needlework, without experiencing intense uneasiness in and around the eyes, and in aggravated cases pain in the eyes and across the brows. If the eyes be still applied to close work the sight becomes confused and clouded. The symptoms are greatly aggravated by artificial light. Photophobia is frequently added, and in one case observed by Dr. Fitzgerald was so intense that the patient had to use an eyeshade and sit with her back to the light. Lacrymation is seldom, if at all, complained of, and in the most aggravated cases it is exceptional to find it. The obstruction may occur in the puncta, canaliculi, or nasal canals. The puncta may be narrowed, and are sometimes so small that it is difficult to introduce Bowman's small director, or the very fine silver probe of Anel's syringe. When the obstruction is in the nasal canal it is probably owing to thickening of the mucous membrane. Dr. Fitzgerald confessed his inability to account for the manner in which the symptoms are produced. Gelowski attributes them to the irritative action of the tears lodged in the *cul de sac*, and says that they change from neutral to a distinctly alkaline state. The treatment obviously consists in removing the obstruction. Dr. Fitzgerald injects water through the lower canaliculus by means of Anel's syringe. If there be an obstruction in the nasal canal the water returns through the upper puncture and fills the conjunctival *cul-de-sac*. The syringe not only thus aids in diagnosis, but often overcomes the obstruction in mild cases. It may be better, on the whole, to slit up the canaliculi, for then if the symptoms persist the nasal canal can easily be catheterised. Conjunctival irritation may be treated with a mild astringent lotion. Dr. Fitzgerald narrated three cases illustrating this peculiar affection. In the first, syringing the lacrymal passages proved of some benefit; the canaliculi were slit up, and both nasal canals found obstructed; after being some time under treatment the patient was enabled to work by gas and lamplight, and expressed himself surprised at the improvement. In the second case, syringing the lacrymal passages for some time enabled the patient to read with ease and comfort without glasses, which had been previously required. The third case experienced no relief from the syringe. Photophobia afterwards set in, and slitting up the canaliculi proved satisfactory.

IRISH HOSPITAL GAZETTE.

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Original Communications.

A SINGULAR CASE OF DILATATION OF THE ŒSOPHAGUS.

By HENRY DAVY, M.B., M.Ch., Univ. Dubl.,
Medical Officer of Terenure Dispensary District, Co. Dublin.

ON the 28th of September, 1869, I was consulted by Mr. R——, aged 38, a gentleman farmer, unmarried, and of temperate habits, who had been suffering for the last ten years from difficulty in swallowing, nausea and vomiting, almost immediately on taking food, and especially after breakfast; feeling some days better, other times worse; for years he could not sleep on his left side, if he did he felt a smothering sensation, and threw up quantities of slimy fluid, which was free from acidity and without a disagreeable taste, and at this period he lost much flesh. In 1859, while lifting a heavy weight, he gave himself a severe strain, and felt as if something gave way or tore inside, and from this time these symptoms gradually made their appearance.

On examination I found him suffering from uneasiness and pain, as if something was raking or tearing inside, which he complained of in attempting to swallow, and referred to the epigastric region. He also had a sensation of heat and burning extending along the œsophagus, and he experienced an obstruction to the passage of food into the stomach about the ensiform cartilage to the right side. He described the food as if it was churned in his stomach, and great quantities of inodorous flatus were at times eructated. The matters vomited consisted of considerable quantities of glairy mucus, like the uncoagulated white of egg. The vomiting occurred most frequently in the morning, owing probably to the accumulation of the slimy fluid during sleep, which was sometimes ejected without the simultaneous discharge of food. The sickness was in a great measure relieved by lying on his right side; his appetite was craving, and he suffered much from thirst. On applying my hand to his abdomen, a pulsation was felt about the epigastrium simulating that caused by an aneurism. There was considerable pain and soreness on pressure, and dulness on percussion in this situation, and he also complained of pains in his shoulder and back. There was no enlargement of the cervical, axillary, or inguinal glands, nor hæmatemesis to indicate malignant disease. His tongue was quite clean throughout his illness, his bowels were obstinately confined for about three weeks, his pulse varied from 92 to 120, he had a hard, dry cough, and on auscultation the heart and chest sounds were found to be normal.

He was ordered granulated citrate of magnesia to relieve the sickness, and act as a gentle aperient, and an enema of castor oil and turpentine to clear out the bowels, but without effect. His diet consisted of beef-tea, barley-water, milk, soda water, brandy, together with arrowroot, and other farinaceous substances. The vomiting still continued notwithstanding all the remedies I could suggest, viz.—ice, champagne, hydrocyanic acid, bismuth, conium, carbolic acid, issues, and other anti-emetic measures. As he was rapidly sinking, I resolved to give the stomach rest, and I directed nutrient enemata, composed of beef-tea thickened with arrowroot, the yolk of an egg, a little Liebig's extract of beef, and a dessertspoonful of brandy, in bulk about half a pint, to be administered slowly three times a day. The enemas produced sickness of the stomach during their administration, but were generally retained, and my patient was much benefited by them; at the same time I allowed very small quantities of liquid food to be taken by the mouth, but this was invariably ejected; he had occasionally a small opiate enema at night to induce sleep.

This treatment was steadily continued till the 31st of October, a period of over four weeks, when he experienced a sensation in his stomach as if something had opened or given way inside, and he felt the food to pass down, and there was a copious discharge of fæculent matter from his bowels, after which the food remained on his stomach, and in a short time he became quite convalescent.

Mr. R—— having given up his farm, and taken a situation in the North of Ireland, continued in apparently good health for the next five years, weighing 11 stone 5 pounds, and during this time he paid me several visits when he came to Dublin, and the only inconvenience he experienced was that he was obliged to take his meals in a semi-recumbent position, with his right arm over the back of a chair, having found this the only posture that would allow the passage of food into his stomach; in any other position he felt very uncomfortable, and experienced a smothering sensation, that brought on a fit of coughing. In a letter which I received about one month before his death, he said, "the obstruction is growing

deeper down, as it requires more forcing to get the food into the stomach; I am very strong and take good care of myself, so far as chop for dinner, eggs, bread and butter for breakfast; I don't spare the butter; my bowels are in perfect order; I don't take medicine."

In January, 1875, he had a similar attack to that which he had five years previously, and died after ten or eleven days illness, from inanition, no food remaining on his stomach. Mr. R—— had expressed a wish that after his decease a *post mortem* examination should be made, in order that the exact cause of his death might be ascertained. Being kindly assisted by my friend, Dr. Charles Jones, of Rathgar, we made the examination about forty-eight hours after death. We found the œsophagus enormously dilated throughout its entire course, resembling the colon in appearance, when distended with air, and measuring at its broadest part (the upper part of its lower third) 9 inches, and through the rest of its circumference above and below about 8 inches; its muscular coat was very much hypertrophied. The œsophagus was slightly distended with flatus, and contained about a wineglassful of brown fluid like tea, which was prevented from entering the stomach, by a twist or volvulus at its cardiac extremity, at its passage through the diaphragm. This circumstance, in my opinion, accounted for the facility with which Mr. R—— swallowed when he stretched himself, by undoing, so to speak, this twist. On filling the œsophagus with water, we found it was capable of holding two pints of fluid, and we observed that the mucous membrane was studded at the dilated part with several irregularly shaped ulcers, varying in size from a pin's head to a two shilling piece. We also perceived innumerable small white spots (cicatrices), the remains no doubt of old ulcers which had healed. The cardiac extremity of the œsophagus admitted readily the index and middle finger, and there was no indication whatever of malignant disease, aneurism, or tumour, to account for the pulsation which was felt during life. The stomach was enormously dilated, and its coats very much thinned, measuring when distended with air 33 inches along its greater, and 9 inches along its lesser curvature, and 21½ inches at its widest circumference; and on filling it with water we found it capable of holding nearly 9½ pints of fluid. The stomach contained a large quantity of brown tea-like fluid similar to that found in the gullet, and its mucous coat did not present any abnormal appearance, and was quite free from any indication of ulceration. As to the pylorus, I may observe, that it admitted the point of the little finger, and was in every respect quite healthy.

In the *Edinburgh Journal of Medical Science* for March, 1855, Dr. Evans Reeves, of London, describes three forms of dilatation as occurring in the œsophagus:—1st, as spindliform dilatation which appears to be the most frequent, all the coats being affected; 2nd, as sacciform dilatation; and 3rd, as œsophagocele, where the mucous membrane protrudes between the muscular fibres of the canal.

Albers *(Pathol. Anatom.)* considers dilatation of the œsophagus to be a congenital disease; but Dr. Reeves considers it a disease of the prime and decline of life; it is more frequent in males than females. It may be caused by a blow on the sternum, a strain, inflammation, ulceration, after gastric fever, tumours of various kinds, pressing on the œsophagus, and preventing the entrance of food into the stomach, malignant disease, &c. As to duration, it has been stated to continue from one to forty-eight years, or even a lifetime. In some of these cases the patient is obliged to press and use friction on the neck in order to facilitate the descent of the food into the stomach.

A NOTE ON THE IDENTIFICATION OF PERICÆCAL POUCHES.

By A. MACALISTER, M.B.,
Professor of Comparative Anatomy and Zoology in the University of Dublin, &c., &c.

WALDEYER'S interesting paper on this subject, of which Dr. Collins has given an abstract in the last number of this Journal, although not a complete résumé, is the best summary which has appeared on the subject. The reader of the abstract would, however, be liable to fall into a misconception as to the nature of one pouch therein referred to, and would be led to believe that the *fossa cæcalis* of Waldeyer was identical with the *recessus retro-cæcalis* described by one of our Dublin Students, Mr. G. R. Leeper.

A careful reading of Waldeyer's paper, and an examination of the authorities which he has quoted, will clearly show that although near in position, yet they are not identical in this respect, nor in nature, nor in causation. The fossa cæcalis was first described by Huschke, who is quoted by Waldeyer at second hand from Sömmerring's Eingeweidelehre. On turning to Huschke's description I find that *(subvoce cæcum)* in speaking of the varieties in position of this intestine he says it is sometimes higher than usual, and this he explains as an arrest of development; in contrast with this condition he mentions having also found it *lower* than usual, by the *effect of an exaggeration* of its normal type (method of descent), and then he adds the words quoted by Waldeyer, that he has sometimes found a falciform fold produced by the peritoneum and fascia iliaca very prominent inwards and upwards, forming a sort of bed for the cæcum.

In a previous section of his "Eingeweidelehre,"

Huschke, in describing the peritoneum, while describing the relations of the mesenteriolum, refers to Hensing's description(1) of the peritoneal folds related to the cæcum, especially the band which he calls the ligament of the cæcum.

That Treitz regarded this pouch of Huschke's as a peritoneal bed for the cæcum only, and formed by it, appears from his paraphrase of Huschke's description, when he says that(2) through the *down-sinking* of the cæcum, the peritoneum of the iliac fossa becomes often somewhat displaced, and forms a flat, updirected pouch, wherein the cæcum lies; this he describes as rare, and only found in children and young persons, and he makes no reference to any related condition of the iliac fascia.

Langer's case, occurring in the body of a young soldier, is described by him in much the same terms; and in commenting on it he expresses his opinion that it can only exist when the point of union of the small with the large intestine is attached to the abdominal wall for much of its circumference, and only clothed with peritoneum in front.

In Waldeyer's instance of the girl who died of endocarditis, he gives the boundaries of the pouch as *two folds of peritoneum*, the left from the angle of union of the two folds bounding the ilio-cæcal recess, *i.e.*, from the mesenteriolum, the right being Huschke's ligament of the cæcum; these passed into each other externally. In its fundus lay the vermiform appendix, and beneath it were two digital appendices; but here, as in Langer's case, there is no allusion to fascia iliaca, which is remarkable, as Waldeyer was acquainted with Huschke's description.

From these cases Waldeyer deduces the following diagnostic marks of this fossa, which he names *fossa cæcalis*. 1st. *The peritoneal fold bounding it to the right passes from the hinder wall of the abdomen to the lateral circumference of the cæcum*, that is, Huschke's ligament, or the right colic ligament of Hensing. 2nd. *That the end of the cæcum most accurately fits into the groove.* He also supposes that this pouch is caused by the cæcum through extended growth, pushing its way downwards, when already the end of the ascending colon is fixed by the stoppage of the growth of its mesentery, so that the elongation pushes the subjacent parts forward.

With this my own observations lead me thoroughly to agree; I have noticed two conditions to result apparently from such an elongation, and one of them is the formation of this fossa cæcalis. In two cases of it that I have seen, the characters above given were clear, as well as the following:—The fundus of the cæcum was, as Huschke noticed, farther down and forward than usual, having burrowed towards the front wall of the abdomen—the circumference of the cæcum was only clad for about $\frac{2}{3}$rds with peritoneum, as Langer remarked, and the vermiform appendix was below the cæcum in the pouch, while the descending colon was long and sinuous.

Now let us turn to the *recessus retro-cæcalis* described by Mr. Leeper, and drawn by Mr. O'Carroll.(1) In it the pouch is formed primarily of iliac fascia covered loosely by peritoneum. There was no ligament of Huschke, nor did any part of its peritoneal covering pass directly to the cæcum, the limit of whose meso-cæcum is shown clearly in the sketch. The cæcum had not descended below the level of the intervertebral substance between the third and fourth lumbar vertebræ, and could not by any ordinary force have been pulled into the fossa. The peritoneal clothing of the cæcum was complete, continuous with the lower edge of the mesentery, as in the instances described by Prof. Gruber. There was no hinder peritoneal fold bounding the pouch, and the subject was an old man. Thus the sac differed in every respect from the diagnosis given by Waldeyer, and from the characters assigned to it by Treitz. The only authors who found a fold of iliac fascia related to cæcal fossæ are Huschke and Biesiadecki; of whose cases we will see further in conclusion. Obviously the cause assigned for the pouch by Waldeyer is utterly inapplicable to the Leeperian pouch. What the result of the descent of the cæcum would have been in this case is not hard to see; as following its usual guide, if the intestine had elongated, the sac would have passed in front of the pouch from which it would have removed its entire peritoneal covering, and it would then have exhibited its true value as a post- or sub-peritoneal fossa, rather than as a peritoneal involution.

The three instances given by Biesiadecki(2) are the only ones hitherto recorded which are at all comparable with that of Leeper. In each of these the retro-cæcal pouch was distended by having portions of the intestine forced into it. Strictly speaking, however, his name "fossa iliaco subfascialis" is inapplicable, as the pouch of Leeper is not subfascial, and has no relation to the tendon of the psoas parvus.

We must therefore recognize five pericæcal pouches—subcæcal, cæcal, upper and lower ileocæcal, and retrocæcal; the last being truly behind, not below the usual locality of the cæcum, and owing its existence to the iliac fascial band, not to any disposition of the intestine.

In conclusion, I would notice the existence of

(1) Hensing's Inaugural Dissertation is in the 1st Vol. of Haller's Coll. Dissertation.

(2) *Hernia retroperitonealis Ein Beitrag zur Geschichte innerer Hernien.* Prag. F. A. Credner, 1857, p. 110. This work deserves all the praise which Hyrtl in his Handbuch gives it.

(1) The drawing illustrating this pouch was made in Sepia, by Mr. O'Carroll, Medical Student, T.C.D.

(2) *Untersechungen aus dem Krakauer Pathologische Anatomischen Institute.* Wien. 1872.

two rarely occurring retroperitoneal pouches, not hitherto noticed by anatomists, viz., one below Gruber's ligamentum mesenterico-mesocolicum, and two in the neighbourhood of the spleen, one between the contiguous parts of the phreno-splenic and gastro-splenic omentum, and the other between the parietal attachments of the splenic flexure of the colon and the inferior limbus of the root of the gastro-splenic pedicle.

Original Lectures.

CLINICAL LECTURE ON CEREBRAL DISTURBANCES IN URÆMIA.

By C. J. NIXON,
Physician to the Mater Misericordiæ Hospital.

GENTLEMEN—You have had opportunities in the Surgical Wards of becoming acquainted with the form of uræmia developed in those affections where there is mechanical obstruction to the passage of urine. In such cases, as a rule, the train of symptoms produced is remarkably uniform—repeated rigors, hot skin, a feeble, rapid pulse, a strongly urinous smell exhaled from the cutaneous and respiratory systems, hiccough, and intelligence normal at first, but merging gradually into low muttering delirium and coma, are the usual concomitants which characterize what is called the typhoid condition of uræmic poisoning. It is to this form that the term "Ammoniocæmia," introduced by Professor See, is specially applicable. There is no question of the fact that where there is prolonged retention of urine the urea undergoes conversion into carbonate of ammonia, and it is stated that the same change takes place in the urea vicariously excreted by the intestines in Bright's disease; moreover, we have evidence of excessive development of ammonia in the system generally by the smell from the breath and skin; so even whilst it be granted that the relation of symptoms to the urea change as an effecting cause has by no means been cleared up, still as a sign which is so prominently present, a nomenclature which typifies the conditions associated with it, is neither incorrect nor inappropriate. In the Medical Wards, however, the semiology of cases of uræmia is by no means so uniform, and a short review of some of the forms met with may not be uninteresting.

In most cases of cerebral affections occurring in renal disease, we may accept the *dictum* of Addison as to the general condition of the patient found—a pale face, a quiet pulse, a contracted, or undilated, and obedient pupil, and the absence of paralysis. In every instance the blood is impoverished: its red cells are diminished in number, and it becomes more or less charged with elements which render it impure. In many cases Bright's disease terminates by visceral complications, which do not implicate the functions of the nerve-centres, as from pleurisy, pericarditis, or fatty degeneration of the heart; but very frequently, however, symptoms of nervous disturbance manifest themselves, and we have Dr. Johnson's authority for saying that the advanced form of Bright's disease, especially the contracted kidney, has a natural tendency to terminate with symptoms referable to the brain. Sometimes death results from coarse pathological changes in the brain, such as embolism of its arteries, or sanguineous apoplexy, which explain the paralytic lesions, the delirium and coma met with: but in other cases no appreciable alteration of nerve tissue has been found to account for the morbid phenomena developed, which are described under the term uræmia. Indeed Dr. Todd specially mentions, when speaking of delirium and coma, that both these states may exist in a brain which reveals upon the minutest scrutiny no appreciable alteration from the natural standard.

The first case to which I shall direct your attention is that of an old man named T——, who was under my charge in St. Camillus' Ward in November last. He was a gardener by trade, of intemperate habits, and frequently exposed to severe wettings. He was very markedly anæmic, had that peculiar œdematous condition of the conjunctiva which is so characteristic that it is termed "the Bright eye:" he was generally anasarcous; had pulmonary emphysema and the signs of fatty heart; the urine was albuminous to a third, of low specific gravity, and loaded with granular tube casts; he had occasional headache referred to the crown of the head, and progressive dimness of sight, which on ophthalmoscopic examination was found to be due to a form of retinitis occurring in Bright's disease. During the progress of the case the patient's manner became dull and sluggish: he got irritable, and refused to answer questions, or take his food or medicines: his pupils were dilated: he became drowsy and somewhat delirious, had incontinence of urine, and finally sank gradually into fatal coma. The duration of the cerebral symptoms was about ten days, and no fever was developed during the time of their progress. In this case a strange extra-pericardial sound and functional endocardial murmur developed themselves, and I took occasion at the time to call your attention to both these phenomena, so that I need not allude to them now. At the autopsy we found the kidneys large, pale in colour, lobulated and fatty. The left ventricle of the heart had undergone fatty degeneration; there was no diseased condition of the arteries. Circumstances did not permit an examination of the brain. In this case, then, you will bear in mind that the cerebral disturbances were shown by *pain in the head, dimness of vision, mental hebetude, transient delirium* and *coma.*

The second case which I shall bring under your notice is that of the little boy, B——, aged 10 years, who was admitted under my care into St. Vincent's Ward on the 18th February last. He had the history of having a red rash on the skin without throat affection. A week prior to admission his face became swollen, and two or three days afterwards he suddenly got violent headache, vomited a quantity of greenish fluid, and on the following morning he was completely blind, but in a few hours sight was restored: there had been no convulsive seizure. When first brought under observation in Hospital we found the boy very anæmic, sensible, but drowsy; pulse 86; tongue clean. He complained of some sickness of stomach and great headache. Whilst the resident pupil was taking the notes of the case, his face suddenly became congested, the mouth was spasmodically drawn to the left side, and the corresponding side of the body was seized with clonic convulsions of moderate intensity; the pupils became dilated, and well-marked nystagmus of both eyes was developed, and continued until the return of consciousness, after an interval of about thirty minutes. Three hours afterwards he had a second convulsion of a similar unilateral nature, and again 4½ hours after this, a third seizure of a very violent character took place, during which the right extremities were also convulsed. This fit lasted about a quarter of an hour, and during it the pulse rose to 172, and the axillary temperature to 99° F., both falling to normal in the intervals. After each seizure sight was lost, but was gradually restored in from two to three hours. A careful examination of both fundi was made with the ophthalmoscope, but no change whatever could be found in either the optic discs or retinæ. The urine which was drawn away by the catheter, threw down a large whitish deposit on cooling. It was highly acid; sp. gr. 1027, and albuminous to ¼. Microscopically it was found to contain the rhomboidal crystals of uric acid in exceedingly large quantity, abundant epithelial tube casts, and red blood corpuscles. At this time there was no dropsy of the face, but a barely appreciable amount of œdema of both lower limbs was found to exist by pressing firmly with the finger over the tibiæ. The treatment adopted was obviously one to promote excretion by the skin and bowels, and relieve the congested kidneys. Moderate wet cupping and poulticing the lumbar regions; a drastic purge of the compound powder of jalap and calomel; a mixture containing infusion of digitalis, acetate of potash and spirits of nitrous ether and the warm bath were ordered to fulfil the indications. He seemed to improve for some days, but on the 23rd February he had a severe convulsion, preceded by sickness of stomach and stupor; and on the following day the urine, which had been passed daily in quantity varying from 25 to 30 oz., diminished to 11 oz. The eyelids became œdematous, and he had another severe convulsion, followed by delirium. At the risk of exciting irritation, the diuretic before prescribed was now given in the decoction of broom-tops, and an electuary of the bitartrate of potash was administered in suitable doses twice daily. As the warm bath had not appeared to have acted on the skin, you may remember I employed the packing bath, wrapping the little fellow in blankets wrung nearly dry out of hot water, and then covering him up in dry blankets. This produced most marked diaphoresis, and was well borne. The case progressed very favourably: there was no return of the convulsions. On the 1st of March the urine was passed in quantity up to 43 oz.; it contained barely a trace of albumen, and was perfectly free from uric acid and tube casts. The further progress of the case was only marked by the anæmia from which the boy suffered, and for which he is taking with advantage the tincture of the perchloride of iron.

This case obviously was one of acute desquamative nephritis, most probably of scarlatinal origin, because, though we have no mention of sore throat, you may recollect we had the history of a red rash on the skin. As contrasted with the first case, the symptoms of cerebral disturbance are remarkable, for their acute invasion, for their rapid subsidence in health, and for the existence of a transient lesion of a special sense. Acute nephritis, when attended with nervous lesions, leads to sudden coma, convulsions, or both, and its mode of termination for the most part is either in death or recovery.

These two cases, then, which I have narrated to you fairly illustrate the symptoms of the two forms of uræmia often met with; namely, the acute and chronic; but in addition to these, we have described by Addison other lesions of cerebral function; for instance, sudden coma with stertor may be developed, as in the cases which are described as serous apoplexy. This is a form specially apt to be developed in those latent cases of Bright's disease where there is a cirrhotic or contracting kidney, and where it is of importance to discriminate between it and the condition produced by sanguineous apoplexy. The pallid face, rapid breathing, and hissing stertor, as contrasted with the deep guttural sound of ordinary apoplexy, and the profoundness of the coma, are the points relied on by Addison in the diagnosis of *serous* apoplexy in Morbus Brightii. We meet with it occasionally in the very early stage of Bright's disease, and as an evidence that cerebral lesions are developed with a degree of intensity out of proportion to the extent of the renal disease, I may narrate a case in point.

A prostitute, aged about 20 years, of extremely intemperate habits, received in a street brawl a

blow on the back of the head. Some twenty-four hours afterwards she was seized with a fit, which was described as being epileptic; a second and third fit followed after an interval of about one hour between each, and she was brought to the Hospital in the evening. When questioned by the Resident, she was sufficiently sensible to say that she never had any illness up to the time of her present attack, and she gave her name and age. When I saw her on the following morning she was unconscious: she had a rapid pulse, a hot, moist skin; her pupils were normal. Respiration was extremely irregular, noisy, and at intervals greatly increased in frequency up to a certain standard, when suddenly both thumbs were bent into the palms of the hands. The right side of the body became rigid, and the left affected with violent clonic spasms; a peculiar sniffing, quick respiratory sound was heard; the pupils became widely dilated, frothy mucus escaped from the mouth, and after about a minute and a-half, with a sigh as if of relief, the patient became quiet, but remained unconscious. The convulsions recurred with decreasing intervals, ultimately both sides of the body became affected with the spasms, and when placing her sitting up in bed for the purpose of wet-cupping the lumbar region, she suddenly fell back dead. The *post mortem* examination revealed in this case very interesting conditions. No urine was obtained during life, and the bladder was found empty after death. The surface of the body was pale and exsanguine. The liver was large, of a lightish yellow colour, weighing 3 lbs. 9½ oz., extremely friable, decidedly fatty, and adherent to the surrounding parts by old perihepatic inflammation. The kidneys weighed each 4½ oz., the left one being heavier than the right; both were of a deep chocolate hue, softened, and on section they were found extremely congested and dripping with dark blood. The cortex in both seemed gorged with blood. The lungs were the smallest I ever saw in an adult, and weighed together, singular to say, only 14 oz. They were of a lightish pink colour, and almost entirely bloodless. The heart weighed 8¼ oz., the left ventricle being slightly hypertrophied: the valvular apparatus was normal. The aorta, however, which was healthy throughout, was extremely small in calibre, being only nine-tenths of an inch in diameter, and barely admitting the little finger. On removing the calvaria, the dura mater was found adherent to the bone: the brain and spinal cord were remarkably dense and preternaturally white in colour, and in the former scarcely any puncta cruenta could be descried. There was some fluid in the ventricles, and a considerable increase of fluid in the subarachnoid spaces, giving a marked œdematous condition to the surface of the cerebrum. No abnormal change, at least of any gross nature, could be found in the structure of either the brain or spinal cord. We must take into account in this case the condition of the liver, and the probably abnormal development of the aorta and the lungs: still I believe, from the condition of the kidneys and the nature of the epileptiform seizures, terminating in such profound coma, that the case was an instance of acute uræmia supervening in the early stage of acute nephritis; and it is not improbable that the injury received may have had the effect of causing disturbance in a nervous system, poisoned by alcohol and retained urinary excreta. This case, which I take it was one of serous apoplexy, shows us how grave cerebral lesions may be developed with *apparently* little organic change in the kidney. But it has a further interest, as it supports one of the views held with regard to the pathology of uræmia, which I now propose to consider. Traube has advanced the hypothesis that as in Bright's disease there is a marked hydræmic condition of the blood, a tendency constantly exists to transudation of the blood serum; the heart, moreover, undergoes hypertrophy, and there is a consequent increase of blood pressure. When this pressure becomes excessive from any cause, or that a still further decrease in the density of the blood ensues, serum exudes through the cerebral vessels, and œdema of the brain results, in consequence of which you necessarily have pressure on the arteries and capillaries, and resulting anæmia; if the cerebrum alone is affected, coma results; if the pons Varolii and medulla oblongata, convulsions; and if both combined, coma and convulsions ensue. This view of Traube has been confirmed by some experiments of Munk, who has succeeded in producing uræmic convulsions by ligaturing in animals the ureters and the jugular veins, and injecting water into blood. The uræmic seizures were prevented by ligaturing the carotids, so as to prevent the excessive blood pressure on the brain. Now this view of Traube is, I think, of value in explaining the production of uræmia under certain conditions: for instance, in the fatty form of Bright's disease, where one of the earliest and most prominent signs is marked dropsy of the cellular tissue and effusion into the serous cavities, it seems reasonable to suppose that serous exudation would take place from the vessels of the pia mater considering their number and the nature of the tissue in which they are imbedded. Moreover, on this assumption we can understand how in cases where symptoms of uræmia are manifested a sudden amelioration of these symptoms takes place, and the patient from being comatose, recovers, at least for a time, perfect possession of his mental faculties. One of the characteristics of dropsy in Bright's disease is its peculiar tendency to shift its position: the œdema attacks at one time

the face, then the legs or the abdominal wall, and leaving these parts, returns to that originally affected. May we not assume that in a similar manner the dropsy may recede from within the cranium, thus freeing the patient from his cerebral lesions?

This form of cerebral œdema occurs, too, I believe, in the so-called cases of serous apoplexy, but it remains still to be seen whether this condition is a constant pathological sequence of uræmia, and we have sufficient reasons for doubting its existence in cases where there is no marked hydræmia or cardiac hypertrophy. What effect retained effete matter may have in the causation of symptoms, it is difficult to say. Whilst we have been taught by the observations of Cyon and others, that urea was formed in the liver, the experiments of Opper and Zalesky seem to prove that both it and uric acid are produced in the kidneys. Both these observers have shown that no accumulation of urea took place in the blood of animals who had been nephrotomised; whilst after ligation of the ureters a considerably increased quantity of urea was found in the blood and in the tissues, being derived, doubtless, by re-absorption from the urinary passages. If these experiments be accepted, they clearly go to prove that the kidneys have the power of forming urea from certain primary products of tissue metamorphosis pre-existing in the blood, such as creatine and creatinine, and other extractives. Uræmia then would depend, not upon the retention of urea in the blood, or its conversion there or in the intestine into carbonate of ammonia, but upon the retention of elements which it is the function of the kidney to *alter* and excrete. This view has in its favour the experiment of Frerichs, who found injection of urea into the blood of certain animals perfectly innocuous; and also the observation of Rees, who states that large accumulations of urea may take place in the blood in Morbus Brightii, without the induction of toxæmia. The view seems also to a certain degree tenable in those cases met with where urine of a specific gravity of 1002 to 1003 has been passed daily, in moderate quantities, for years, and also in those extraordinary cases recorded, where there has been total suppression of urine for a prolonged period. Still it is extremely difficult to conceive that organs, incapacitated by disease from excreting any effete elements, would still be sufficiently sound to convert these into principles which though retained are innocuous. The theory, moreover, leaves unexplained why and how uræmia is produced in some cases, and absent in others. Just as we meet with cases of jaundice, when symptoms of acholia are developed, the production of which, notwithstanding Dr. Flint's views regarding cholesteræmia, I am justified in saying are equally inexplicable. For my part I think we must look to sudden and marked alteration in the circulation of the brain to explain most of the phenomena of uræmia—phenomena so closely allied in most instances to epilepsy, the pathology of which is cerebral anæmia. Vasal spasm is not perhaps unusual in renal affections. Rayer demonstrated that a rough grasp of the kidney in a rabbit was sufficient to excite visible contraction of the vessels of the spinal cord. A form of paroxysmal dyspnœa occurs frequently in Bright's disease, closely simulating spasmodic asthma, but supposed by some to be due to spasm of the minute branches of the pulmonary artery. I may remind you of the explanation which I offered in accounting for the cardiac hypertrophy which so frequently complicates chronic renal disease. You are aware of the experiment of dividing the spinal cord high up, and irritating the lower cut surface. The irritation is conveyed to the splanchnic nerves by some nerve fibres emerging from the cord below the third dorsal vertebræ, and coursing along them; and it results in producing contraction of the aorta and all the visceral arteries, the force and frequency of the heart being increased in a manner similar to that resulting from mechanical pressure upon the abdominal aorta. It scarcely seems far-fetched to assume that in the inflammatory changes constantly occurring in Bright's disease, an irritation may be conveyed to the spinal cord, probably by the smallest splanchnics which enter into the formation of the renal plexuses, and reflected through the great splanchnics, producing general vasal spasm, increased arterial tension, and consequent cardiac hypertrophy. It is not necessary in accepting this theory to admit the existence of permanent spasm, as alternation of increased and diminished arterial tension would, I believe, generate an excited state of cardiac nutrition, and a resulting increase of cardiac volume.

I confess, then, I regard the view of arterial spasm as the one most capable of explaining the phenomena of uræmia, their sudden evolution and equally sudden cessation. If in Bright's disease the conversion of the primary products of nervous waste into urea and uric acid is arrested, it is manifest a retention of these products would have the effect of retarding metamorphosis of the tissue from which they are derived, hence its susceptibility to even slight changes affecting its blood supply.

In connection with cerebral troubles in uræmia, I may allude briefly to the lesions of vision met with. Ophthalmologists describe two forms of disease occurring in albuminuria, uræmic amblyopia and retinitis albuminurica. The former generally occurs in acute Bright's disease, and is associated with the graver symptoms of uræmic intoxication. Sight may be suddenly lost for a time, but soon after the cessation of coma or

convulsions it may, as in B——'s case, be completely restored. In exceptional instances, however, this form may terminate in retinitis, and one case of this mode of termination has been recorded, I believe, by Graefe. In uræmic amaurosis or amblyopia, no appreciable changes exist in the retina or optic discs, though it would be interesting to determine, if an examination were practicable during an epileptoid seizure, whether some evidence of altered circulation might not be found. In connection with this it is interesting to mention that Dr. Hughlings Jackson had an opportunity of examining the retina during an epileptic fit; he observed extreme pallor of the optic discs and retinæ, and occasional disappearance of the outline of the vessels, and to this condition this observer applies the name of epilepsy of the retina. Uræmic amblyopia, as far as is now known, is similar to amaurosis, arising from reflex irritation, especially originating in the branches of the fifth nerve, as from severe dental neuralgia, in which cases ophthalmoscopic examination affords negative results. In uræmia its pathology is obscure, though probably it depends upon impure blood affecting the nutrition of the centres from which the optic nerves arise. In chronic renal disease, especially in the cirrhotic form, the lesion of sight is of a more lasting duration, and attended by pathological changes so characteristic and marked, that we owe to Leibreich the observation that Bright's disease may be often diagnosed by the ophthalmoscope alone. In the first stage of this affection, the principal signs described by Soelberg Wells are—a fulness of the retinal veins, which become dilated and tortuous, the arteries being narrowed and soon hidden by a serous exudation which infiltrates the optic nerve and its expansion; the optic disc becomes swollen, and its outline gradually merged in the retina. The latter assumes, from the serous exudation, a faint fawn-coloured appearance, in which delicate light greyish striæ are found, which are due to sclerosis of the connective tissue and of the nerve fibres. As the disease progresses streaky hæmorrhages, remarkable for their number and size, occur in the direction of the retinal vessels, and peculiar white spots, which are regarded either as discoloured blood or fatty degeneration of the cellular or connective tissue elements, make their appearance at the central parts of the retina, and by coalescing form a broad white mound around the optic disc. In the neighbourhood of the yellow spots of Sömmerring bright stellate spots appear, as if this part had been splashed by a brush. The impairment of sight in this affection is slowly progressive, and it is usually associated with an hypertrophied left ventricle.

With reference to headache in renal disease, I believe you will find it a very common symptom: it is mostly constant, and referred to the crown of the head. Some theories have been offered to explain its occurrence which I do not think it necessary to discuss here. Possibly it is the prayer of the cerebrum for healthy blood.

Progress of the Medical Sciences.

REPORT IN THERAPEUTICS.

By GEORGE F. DUFFEY, M.D., Univ. Dubl.:
Fellow of the King and Queen's College of Physicians; Physician to the Richmond National Institution for the Blind.

NITRITE OF AMYL.

In Epilepsy.—References have already been made in these pages to the wonderful effects of this powerful agent in certain cases of this disease.(1) Dr. S. Weir Mitchell, who was one of the first thus to employ the drug, contributes an interesting paper to the *Philadelphia Medical Times* (March 6), "On the use of Nitrite of Amyl in various forms of spasm, and on its value as an aid to diagnosis." There are two classes of cases of epilepsy, he says, in which its employment is likely to be beneficial: First, those cases which are preceded by an aura, and in which there is time to enable the patient to inhale the nitrite before loss of consciousness sets in; and second, in cases in which the patient has a succession of fits within a limited space of time, and is so placed that a watchful nurse may find time to use it. It does not seem to possess, in most cases, any capacity to lessen the probability of a return of the fits. Dr. Mitchell has stopped with it for hours the convulsions of tubercular meningitis in a child.

In Puerperal Eclampsia.—Dr. Jenks, in 1872, at Dr. Mitchell's suggestion, used nitrite of amyl with success in a case of puerperal convulsions; and in a letter to the *Medical and Surgical Reporter* (Nov. 14, 1874), Dr. Hinton, of Philadelphia, gives the history of the case of a primipara, who six hours after the commencement was seized with violent convulsions; the os also being rigid, undilated, and undilatable. Four drops of amyl by inhalation gave almost instant relief; no more convulsions occurred after its administration, although she had four convulsions previously; the os dilated rapidly, and a safe delivery was soon secured.

In Tetanus.—A case is reported in the *New York Medical Journal* for Nov. 1874, in which immediate benefit was derived from the inhalation of nitrite of amyl, not only in checking the muscular spasms, but also in quieting the pain. Dr. Fuckel (*Centralb.* No. 57, 1874) relates a case of so-called rheumatic tetanus, in which the attacks ceased after the inhalation, three times daily, of two drops of the nitrite of amyl.

In Chronic Gastralgia.—Dr. Forrest publishes in the *N. Y. Med. Journal* for February, the case of a man, aged 33, who for forty-two months had suffered from repeated recurrences of attacks of neuralgic spasms of the stomach. Dr. Forrest first tried the nitrite of amyl by inhalation, but obtaining a slightly relaxing effect only, gave a dose of ɱiiss by the mouth while the patient was suffering from a spasm. The spasm was cut short and remained absent for twenty-four hours, but then returned. A dose of ɱiijss was then given as before: the pain ceased, and has never subsequently returned to an extent sufficient to cause anything but a slight annoyance.

Dr. Fuckel (*Centralblatt* No. 57, 1874), has also found

(1) Vol. II., pp. 141 and 381.

the nitrite of amyl useful in cardialgia. In all cases not complicated with gastric ulcer, the inhalation of a few drops was followed by the disappearance of the pain in a few minutes. The pain sometimes returned in half an hour or later; but it was less severe, and always ceased on another application of the remedy.

In Dysmenorrhœa.—Dr. Mary Putnam Jacobi, in an excellent paper read by her before the New York Medical Journal and Library Association (*N. Y. Med. Journal*, Jan. 2), gave the clinical history of three cases of severe spasmodic dysmenorrhœa, in which the paroxysms were relieved by the inhalation of nitrite of amyl. Although more especially adapted to cases of spasmodic dysmenorrhœa, it has been found, both in the experience of Dr. Mary Jacobi and in that of others, that great relief may be afforded even in those cases in which the dysmenorrhœa depended upon displacements, constriction of the cervix, etc. In the discussion which followed the reading of the above paper, Dr. Sell remarked that he had been in the habit of administering nitrite of amyl by the mouth, and had obtained just as good results as he had obtained when the remedy had been inhaled. He prescribed it in one-drop doses, combined with drachm doses of peppermint water, and repeated every half hour. In one case of dysmenorrhœa, and one only, he had used the nitrite of amyl, and in that case the patient was completely relieved of pain. Dr. Fuckel (*Centralblatt. loco. cit.*) has also met with equally satisfactory results from the inhalation of the nitrite in the neuralgic disorders accompanying menstruation.

In Angina Pectoris and Asthma.—The inhalation of nitrite of amyl in many cases proves of benefit. In *syncope* and in *hysterical convulsions* Dr. Weir Mitchell suggests (*loc. cit.*) that it might well repay a trial, and that possibly in the cerebral symptoms arising from *shock* it may also prove of value, and should be essayed in the cold stage of *ague*.

Further notes on the remedial value of this drug may be found in the *London Med. Rec.*, March 17; and a very complete *résumé* of its physiological and therapeutical effects is given by Dr. Labadie-Lagrave in the *Gazette Hebdomadaire*, Nov. 13 and 20, 1874.

PHOSPHORUS.

Dr. Broadbent contributes to the *Practitioner* (Jan., 1875) an interesting paper giving two cases of angina, one of essential or pernicious anæmia, and one of leucocythæmia, in which phosphorus was of service. This is a further illustration of the successful employment of phosphorus in certain affections of the nervous system, which Dr. Broadbent related in a paper in the same Journal for April, 1873. Dr. Broadbent has not yet been able to define the forms of neuralgia in which phosphorus is specially indicated, though the most striking effects he has seen, have been in cases of low nervous tone, in which the patient is subject to violent attacks of pain in various nerves. Dr. Broadbent thinks that the good effects of phosphorus in the treatment of neurosis is not due to any direct influence upon the nervous functions, but to a "favourable modification of the organic processes leading to improved nutrition of the nervous structures." This view he thinks is supported by the rapid changes which ensue in cases of phosphorus poisoning, and a field for its application may be found in those diseases in which, with an inevitable tendency to a fatal termination, there is no obvious relation between any discoverable structural lesion and the course of the symptoms on the fatal results: *e.g.*, Addison's Disease, Pernicious Anæmia, Leucocythæmia.

The action of phosphorus as a stimulant, especially in fevers attended with great prostration, is shown in the record of two cases of typhus and typhoid, respectively, by Dr. John Brunton, in the *Lancet* of Oct. 31, 1874. The formula used was:—℞. Ether. tinct. phosph. (gr. ½ to 3j), ℥iij; spt. vin. rect., ℥ss; glycerin. ad. ℥iss. one teaspoonful as a dose. The *Philadelphia Medical Times* of Jan. 30, 1875, states that in Dr. H. C Wood's Wards, in the Philadelphia Hospital, phosphorus has been given hypodermically in a number of cases; two to three drops of the oleum phosphoratum (Pruss. Pharm.) being given in eight to ten drops of glycerine. No serious local irritation was produced in any instance. Some excellent observations upon the medicinal employment of free phosphorus, will be found in a paper by Mr. Ashburton Thompson, in the *British Med. Jour.* of Nov. 7th, 1874.

CARBOLIC ACID.

In Phthisis.—From a review in the *Lond. Med. Rec.* (Ap. 14) of a work by von C. G. Rothe, of Altenburg, we learn that that gentlemen commends carbolic acid in the form of inhalations in phthisis, and gives the following formula:—℞.—Carbolic acid in crystals, and spirits of wine, of each two parts; tincture of iodine, one part; distilled water, ten parts. Mix. Twenty-five to thirty drops to be added to one or two tablespoonfuls of water, for inhalation. He uses the same solution for *diphtheria*, to paint the tonsils, pharynx, &c. An Italian chemist, Enrico Savoli, reports the signal success of this treatment in an epidemic in Milan.

In the treatment of *Tapeworm*, Dr. Bell (*Bull. de. Sci. Med.*, and *N. Y. Med. Rec.*, Jan. 9) relates a case in which, after kousso and male fern had been tried in vain for several months, carbolic acid, freely diluted with water, was given four times a day. Two days after this latter treatment was commenced several links of the tapeworm were expelled. The form of the remedy was then changed to pills, and about two grains of the acid were given every hour. Long fragments soon came away, and on the third day the head and four feet of the worm were discharged.

In Diabetes, the use of carbolic acid has been already alluded to in this GAZETTE.(1) A case successfully treated by this drug is reported in the *Philadelphia Med. Times* (Jan. 30, 1875), from the *Gaz. Med. de Bahia*. The formula used in this case was:—℞.—Acid. phenici cryst., gr. xvss; aq. menthœ pip., aq. destillatæ, ää ℥i. M. Sig.—Take one-sixth part morning and evening.

In Malignant Pustule.—Dr. Klingelhoeffer (*Berlin. Klin. Woch.*, 1874, No. 44, and *Phil. Med. Times*), reports three cases successfully treated with carbolic acid. The remedy was applied in the same way in all three cases: the pustule was cauterized as deeply as possible with carbolic acid which had been liquefied by heat, after which compresses were applied which had been saturated in a concentrated solution of the same acid, and it was also given inwardly. The solution for local application was of the strength of 1 to 8 of water or linseed oil, and for internal administration a solution of 0·6 to 180 parts was given in tablespoonful doses every two hours.

In Erysipelas.—The topical use of carbolic acid is stated by Dr. Munsell (*Philadelphia Medical and Surgical Reporter*, Dec. 26, 1874), to be not only palliative in a high degree, but decidedly curative in all erysipelatous inflammation. He applies a strong solution of the acid, in glycerine and rose water, usually in combination with tincture of iodine, with a camel's-hair pencil twice in the twenty-four hours. Sulphite of soda may be added to the mixture to avoid discolouration of exposed parts. In the phlegmonous form of the disease he has also used the hypodermic injection of carbolic acid, as suggested by Dr. Aufrecht,(2) and assures those that try it, either topically or hypodermically, a pleasant, safe, and successful experience.

(1) Vol. II., p. 348. *Vide* also *London Med. Record*, Vol. II., p. 84, and March 3, 1875.

(2) *Vide* IRISH HOSPITAL GAZETTE. Vol. II: p. 107.

IODOFORM.

In Granular Lids.—Dr. Barber (*Detroit Rev. of Medicine*, and *Lond. Med. Rec.*, April 14) reports a case in which "all the remedies known to modern oculistic surgery" had failed, until seeing in a Medical Journal the account of the successful treatment of an intractable ulcer of the leg with iodoform, the idea suggested itself to him that it might be also "good for sore eyes." He made a solution of twenty grains of iodoform in an ounce of glycerine, and applied some to the inner surface of the lids. The patient got well without a drawback in a short time, and Dr. Barber states that he has tried the same remedy in quite a number of cases since with very gratifying results.

In Venereal Ulcers.—Prof. Profeta, of Palermo, records[1] his experience of iodoform as a local application to hard and soft chancres, and to phagedænic ulcerations resulting from the bursting of inguinal buboes. Similar satisfactory results have been already reported in this GAZETTE[2] from the same practice. Prof. Profeta prefers simply strewing the ulcers with the powdered drug to a solution. The objections to iodoform are first its expense, and second, its offensive and penetrating odour, which causes patients using it to diffuse a most unpleasant smell around them. Mr. Berkely Hill in referring to Profeta and Parona's experience[3]—the latter used iodoform with great benefit as an application to painful rhagades at the anus—also reports favourably as to the efficacy of the drug in similar cases.

Dr. McMaster has introduced at the Emigrant Hospital (*N. Y. Med. Journal*, April, p. 408) an ethereal solution of iodoform in the treatment of some venereal diseases. The solution is made by adding ʒss of iodoform to ʒj of ether, and has the advantage of being more thoroughly applied to the tissues, as upon the evaporation of the ether the iodoform is left in a very minute state of distribution. This solution has proved specially serviceable in the treatment of balanitis. The method of applying is to paint it over the inflamed gland with a camel's-hair pencil, and by repeated applications of the solution any quantity of the iodoform may be deposited.

Zeissl (*Wien. Med. Woch.*, and *N. Y. Med. Rec.*, Nov. 16, 1874) has found iodoform of great use as a local application to indolent (syphilitic) ulcers, and also as an internal remedy in syphilis in the form of pills. The dose should be from two to three grains daily. In the treatment of chronic ulcers of the leg, iodoform is also found beneficial.

In Stricture of the Urethra much benefit has been obtained at the Roosevelt Hospital (*N. Y. Med. Jour.*, March, p. 275) from the application of iodoform. The method pursued is as follows:—Every day the stricture is dilated by three sounds, and after withdrawing the largest, a smaller one coated with iodoform ointment is used as an applicator. After the applicator is introduced, the penis is compressed so as to leave the ointment in the urethra upon withdrawal of the instrument.

In Uterine Maladies, M. Gallard (*Philadelphia Med. Times*, Feb. 6) prescribes crayons of iodoform which may be allowed to remain in the cavity of the neck of the uterus, being retained in position by means of a tampon of cotton. These crayons are used with advantage in cases of superficial ulceration of the neck which has invaded the cavity. The following formula is given:—℞.—Iodoform, in very fine powder, ʒiiss; gum arabic, finely powdered, gr. viiss. Sufficient mucilage to make into a pilular consistence. Divide into ten cylinders each about one inch long; dry in the air for twenty-four hours. Each crayon contains a little less than a grain of iodoform. These cylinders are hard and resistant; they may be divided into morsels without breaking. They become disintegrated in the open air, and much more rapidly in the uterine cavity. In order to preserve these crayons, they should be sealed in a dark and air-tight bottle.

In Dysmenorrhœa.—Dr. Bailey (*Philadelphia Med. and Surg. Reporter*, Jan. 9th, 1875) has used iodoform in some cases since the year 1870, with satisfactory results. Made into a pill containing one grain, with extract taraxacum, and given at each meal for a week before the expected period, it will greatly modify the distress which commences twenty-four hours before the menstrual show. Dr. Moses has used iodoform extensively as a local application in ulcerations of the os and cervix uteri, both dry and made into a cerate with cocoa butter.

SALICYLIC ACID.

This newly-discovered disinfectant and antiseptic has already attracted considerable attention, and from the reports that have up to the present appeared as to its effects in preventing fermentation and decomposition in organic fluids, we may infer, making allowance for the praise usually bestowed on everything new, that it is likely to prove a very important and useful article. Although salicylic acid has been for some time known to chemists, as a constituent of the oil of winter-green, gaultheria procumbens, &c., it was not until Prof. Hermann Kolbe, of Leipsic, published an article in the *Journal für Praktische Chemie* for July, 1874, upon a new method of obtaining the acid, that fresh attention was drawn to its physiological and therapeutic properties. By Prof. Kolbe's process, salicylic acid is made from phenol-sodium (C_{12} H_6 O_2, and NaO, HO), into which is conducted dry carbonic acid at a temperature of 170° C. (370° Fahr.) There is formed salicylate of soda which decomposed by hydrochloric acid precipitates the salicylic acid. As salicylic acid is by this new process made from carbolic acid and carbonic acid, and as by heating above the boiling point it splits into the same substances, Prof. Kolbe thought it probable that it might have an antiseptic action, and interfere with the process of fermentation and putrefaction. Results confirmatory of the correctness of this opinion have been obtained in several ways; *e.g.*: 1. Fresh meat rubbed with the acid kept for a week, though exposed to the air. 2. Solution of amygdalin mixed with emulsion of sweet almonds developed no smell of bitter almonds if some salicylic acid were added. 3. Salicylic acid added to beer in the proportion of 1 to 1000 prevented the formation of fungoid growth. 4. Fresh urine was divided into two portions, to one of which salicylic acid was added, while the other was left untouched. After three days the latter was putrid; and the former, protected by the acid, was still clear and free from ammoniacal odour. As a preservative of potable water, used on board ship, from putrefaction, either by the admixture of one part to 20,000, or by simply covering the bung-hole with cotton steeped in the acid, Prof. Kolbe considers it to be peculiarly valuable.

The highest value, however, of this acid arises from the fact that it can be applied to the human system, either internally or externally, without any injurious results. Dr. E. R. Squibb describes (*American Practitioner*, April 1875) its characters as follows:—Salicylic acid is in minute broken acicular crystals, which give it the appearance of a granular powder, soft and smooth under the pestle or knife, but somewhat rough and resinous when rubbed between the fingers. This powder is odourless and nearly tasteless. It is practically insoluble in cold water, but it is very soluble in hot water. The presence of various neutral salts in small proportion in the water render it far more soluble. Up to this time phosphate of sodium seems to have

(1) *Ann. de Derm. et de Syph.*, and *Med. Times and Gazette*, March 27.

(2) Vol. I., p. 334.

(3) *London Med. Record*, Vol. II., p. 763.

been chiefly used in Germany to render it more soluble in water for medicinal purposes, and it is said that three parts of phosphate of sodium will render one part of the acid easily soluble in fifty parts of water. It is much more soluble in alcohol and ether than in water.

"Its alleged advantages over all other antiseptics are:—*First.* That it is far more powerful and effective in smaller quantities. *Secondly.* That it is, in all quantities necessary for complete effectiveness, entirely devoid of irritant action upon the living tissues. It is not caustic nor corrosive in any quantity, and never produces inflammation. *Thirdly.* It is said to reach and prevent processes of decomposition which are beyond the reach of all other antiseptics and antiferments. *Fourthly.* In quantities said to be thoroughly effective, it is entirely odourless and tasteless, and harmless, whilst it has no poisonous effects in any reasonable quantity.

As to its Medical and Surgical applications:—Prof. Thiersch, of Leipsic, has used it upon contused and incised wounds, and in operations, with excellent general results, destroying the fetid odour of cancerous surfaces, and in pyæmic ulcerations. To such uses Dr. Squibb would add the suggestion, that for washing out the cavities of the abdomen and chest after those operations which tend so strongly to septicæmia, solutions of salicylic acid would seem to offer very great advantages.

Prof. Thiersch says that when strewn (either by itself or mixed with starch) on contused wounds not yet cleaned, and on scurfy gangrenous surfaces, salicylic acid destroys, for a long time, the putrid odour, without any inflammatory action of importance. In solution of one part of salicylic acid, three parts of phosphate of soda, and fifty parts of water, it favours the coating over of granulation-surfaces. As to its action on fresh wounds, the following data are communicated. During the operation, the wound is kept under a spray cloud of salicylic acid in water (one in 300). The dressing of the wound consists of wadding, impregnated with salicylic acid in the crystallised state. The wadding is moistened with salicylic acid in water (one in 300), as also the strip of muslin by which it is held. Afterwards, a continuous dripping of the acid solution on the bandage, about eight drops in the minute, is maintained. After an amputation of the femur on April 27, under such treatment, the patient experienced no pain, nor swellings, nor fever. The first renewal of the dressing was on the sixth day. The secretion in the wound during these six days was without smell. With equally good results, Dr. Thiersch performed some other amputations. He is of opinion that salicylic acid has all the advantages of carbolic acid, without its inconveniences.

In the Roosevelt Hospital, New York, salicylic acid is used as a dressing for ulcers, wounds, &c., &c., in the proportion of ʒi to ʒlxijss of water, and so far, it is stated (*N. Y. Med. Rec.*, April 3), its substitution for carbolic acid has been agreeable and quite satisfactory. Mr. S. W. Moore, in the recently issued volume of the *St. George's Hospital Reports* (Vol. VII., p. 232), gives his experience as to the efficacy of the acid as a surgical application, which is not so satisfactory. His cases, however, were only three in number, and case 3 was still under treatment. In all, the soda-salicylate solution of Thiersch as above given was used, which is not so strong as that successfully employed in the Roosevelt Hospital.

Dr. Fehling reports from the Gynæcological Institute of Prof Credé, that in their practice they have found it of service used in solutions varying from 1:300 to 1:900 of water, and in powder one part mixed with five parts starch. Dr. W. Wagner, of Friedberg, has tried it during the last six months in all such cases as are generally benefited by carbolic acid. He finds that it renders the discharges from recent and chronic ulcers inoffensive, and recommends an ointment made by dissolving 1·5 grammes acid in three grammes alcohol, and mixing this with fifteen grammes lard, thereby securing a very efficient preparation. Dr. Wagner also has given it internally in cases in which disease of the stomach or intestines is associated with abnormal fermentation of their contents. In a case of *Cancer of the Pylorus* he gave 0·5 grammes (8 grains) in powder, three times daily, with great advantage, and found the same dose of decided service in a case of chronic intestinal catarrh. In two cases of severe diarrhœa in children he gave a child one year old 0·05 gramme, and to a child three years old 0·1 gramme every three hours, in powder, with gratifying benefit.

In diphtheria, a most satisfactory result has been obtained by Dr. Wagner in fifteen cases, of which more than half were of decided severity, and none really light. In the treatment of these, to children not able to gargle he gave 0·15 to 0·3 gramme in powder, mixed in water or wine, every second hour, and in addition caused those who were able to make use of a gargle containing 1·5 grammes dissolved in 15 grammes alcohol, and mixed with 150 grammes distilled water. If in this crystals formed, they were readily dissolved by gentle heating. Of these fifteen cases none died—a result more favourable than he had expected from the character of the disease at the time, and in all the duration of convalescence was much shortened, being in the mild cases from three to five days, and in the severe at most eight days. Dr. Ludwig Letzeritz, who has tested the effect of salicylic acid in arresting the movements of bacteria in fluids containing these organisms (*British Med. Jour.*, March 6), has also used salicylic acid locally and internally in two cases of diphtheria, he thinks with good effect; but he observes that more extensive observations are necessary in order to determine its value in this disease. It is to be remarked that Prof. Kolbe advises against the internal administration of the acid in the form of powder, as he has found that it attacks, to a certain extent, the mucous membrane of the mouth, œsophagus, and stomach.

In diabetes, salicylic acid has been used by Ebstein and Muller (*Berlin. Klin. Wochen.*, Feb. 1). But, as Dr. Bathurst Woodman remarks in his abstract of the above paper in the *London Medical Record* (March 3), the number of cases (3) and the quantity of salicylic acid given, seem too small to permit any definite conclusions as to its effects to be drawn.

Dr. Boyland, in a letter to the *Lancet* (Vol. II., 1874, p. 785), gives several instances of the antiseptic and disinfectant employment of the acid. He says it is given as an antipyretic in doses of ten grains three times a day, and that Prof. Ludwig is experimenting upon it as a means of preserving anatomical preparations.

For application as a dentifrice, personal disinfectant or preservative from contagion, or for neutralising harmlessly the fetid odour of foul breath or of perspiration, the use of this acid will, according to the *Sanitary Record*, be invaluable(1).

Antigastralgic Drops.—Tincture of nux vomica, tincture of castor, of each, ʒss. Two drops during the crisis in half a cup of infusion of chamomile.—*Le Progrès Méd.*

(1) For further information relating to salicylic acid we would refer the reader to the *London Medical Record*, Vol. II., p. 599; *The Boston Medical and Surgical Journal*, Jan. 28; *The Philadelphia Medical Times*, of March 16, and *La France Medicale*, March 31, from which most of the above particulars have been derived.—Reporter.

Reviews.

Diseases of the Kidney and Urinary Derangements. By W. Howship Dickinson, M.D. Part I., Diabetes. London: Longmans, Green and Co., 1875: Pp. 236.

In the first page of his introduction, the author defines diabetes as "a disease of the nervous system, characterised by the secretion of saccharine urine." The whole work is an attempt to make good this definition, and to show from physiology, pathological anatomy, and clinical observation, that diabetes is essentially a neurosis; that while the liver is the agent in causing the saccharine condition of the blood, the nervous system is the instigator.

A very fair account of the present condition of the physiology of diabetes is given in the first chapter. The author's views on this subject are as follows:—Sugar is normally made in the liver out of glycogen, and is used by the tissues. If the quantity of sugar in the blood exceed a certain limit it appears in the urine. There is no evidence that in diabetes the increase of sugar in the blood is due to its deficient consumption by the tissues, hence it must be attributed to increased supply. This may be due to the ingestion of too large a quantity of sugar in the food, a quantity so large that the liver is unable to convert it all into glycogen, and as such to store it up for future and gradual transformation into sugar. The excess will therefore appear in the urine. This is *normal alimentary glycosuria*. 2. There may be no undue quantity of sugar in the food, but the liver may have lost its power of transforming any glycose into glycogen, and hence all the sugar as it is absorbed passes by the liver without undergoing change. Circulating in the blood is excreted through the kidneys—this is *abnormal alimentary glycosuria*—and often a precursor of more severe forms of the disease. In the first case by diminishing, in the second by withholding altogether the carbohydrates of the food the glycosuria will cease. 3. There may be an abnormal formation of sugar in the liver, from other materials than the carbohydrates of the food. Normally protein compounds are here split into glycogen and urea. In the abnormal circumstances of diabetes the author thinks that the sugar is due not to an increased formation of glycogen, not to an undue transformation of it into sugar, as by excess of ferment, but to a substitution of sugar for glycogen. "The essential vice is a perversion of hepatic action, which while it does not hinder and possibly exaggerates the disruption of the protein bodies, substitutes in the issue sugar for glycogen." "Hence both forms of diabetes may equally be described as failure of the liver to make glycogen, or the due proportion of glycogen, out of what should form it." This perverted action of the liver is due to an unnatural excitement of the circulation in this organ, and that may be due to direct irritation, to a mechanically increased afflux or diminished efflux of blood, but most commonly to an irritative nervous disturbance "analogous to that which causes tetanus, the incidence of irritation in the one case being upon the cord, in the other upon the liver."

In the chapter on pathology we find the results of the author's observations of the minute changes which occur in the nervous centres in diabetes. These are constant, and consist chiefly in the formation of hollow spaces or canals about the smaller blood vessels. These spaces often are so large and numerous as to give to a hardened section of the brain a worm eaten appearance, visible even to the naked eye. They seem to be caused by disturbances in the circulation which gives rise to extravasation or diapedesis of corpuscles, the infiltrated parts subsequently undergoing degeneration and absorption. These changes are found in various parts of the brain, and are considered by the author to be not the result of the contact of saccharine blood with the tissues, but to be themselves the primary change to which the perverted hepatic function is due. In the spinal cord changes similar to those in the brain are met with; the central canal also is generally greatly dilated. In one case miliary sclerosis of the brain and cord was met with. Three plates and several woodcuts illustrate the pathological descriptions.

In the section on ætiology there is a very interesting table given, showing the number of deaths from diabetes for ten years in every county of England and Scotland, as compared with the deaths from all causes, and the population of each county. From this it appears that diabetes is more common in agricultural than in manufacturing and mining districts, that it prevails most in the colder counties, that it has no relation to the prevalence of ague, and is not specially frequent in places where cider is made.

Hereditary predisposition, mental distress or overwork, and injuries to the head, are considered to be the most frequent causes of the disease.

The author rejects Dr. Harley's division of cases of diabetes into those from excessive formation of sugar by the liver, and those from diminished assimilation by the tissues, but thinks that a somewhat ill defined and shifting line may be drawn between cases in which the liver only transmits the sugar brought to it by the portal blood, and those where out of protein substances it forms sugar. In the former case a restricted diet causes the sugar to disappear, in the latter not. Many cases in the earlier stages belong to the first class, and subsequently assume the more severe form.

As to duration, diabetes rarely proves fatal under six months, but does so in a large majority of cases under four years. Some instances are given where the disease has lasted so much as fifteen years, and yet the patient lives; and one very remarkable case where death occurred twelve days only after the patient had run second in a foot race, believing himself at the time to be in perfect health.

Medicinal treatment is considered as of quite secondary importance to that by diet. Of drugs, strychnia, cod-liver oil, iron and phosphoric acid are looked on as of most value. The curative action of opium "is so limited that it may well be believed to have cured fewer of the subjects of the disease (diabetes), than it has killed." The author has found that diabetic subjects possess a very unusual tolerance of narcotic drugs, such as cannabis indica and belladonna. Iodide of potassium diminishes the excretion of sugar, but causes great prostration and loss of appetite to which the diminution in the sugar is probably due. The skim milk treatment receives no favour from Dr. Dickinson.

An admirable account of diabetes insipidus, which is also looked on as a neurosis, concludes the volume.

We can accord very high praise to this book: it contains much which is sure to interest either the pathologist or physician. The second part is to consist of a second edition of the author's work on albuminuria, and the third and concluding part is to deal with the organic renal changes which do not come under the heading of albuminuria. The whole is to form ultimately one volume, but each part is complete in itself.

J. M. P.

Lectures on Skin Diseases delivered at St. Vincent's Hospital. By E. D. Mapother, M.D., &c., &c. Second Edition. Dublin: Fannin and Co. 1875: Pp. 212.

Although many of the most distinguished Physicians and Surgeons have made their reputations by their published Lectures, Clinical Lectures are seldom deserving of publication in a collected form, unless they comprise the result of much original research and ob-

servation, or present what is already known on the subjects discussed in a particularly clear and concise manner. We cannot say that Dr. Mapother's "Lectures on Skin Diseases," while, doubtless, creditable to him as a Clinical teacher in a class of cases the study of which is often neglected in general Hospitals, come up in all respects to the standard we have indicated. Although it is unquestionably flattering to a Lecturer to be requested by "some pupils who heard them," to publish his lectures, it should be remembered that students are not exactly qualified to form an opinion as to the scientific and professional value of such lectures, unacquainted as they must necessarily be with the subject itself, and its existing literature. Still, Dr. Mapother's lectures, as far as they go, contain much useful instruction and information as to the most common forms of skin diseases; and if there is nothing very new or original in them, there is a good deal that is practical and useful, although we must confess the author's style is very rambling and discursive, and in some cases extremely inelegant and vague.

Correspondence.

PARIS.

FROM OUR OWN CORRESPONDENT.

M. Dubrueil on Chronic Affections of the Organs of Locomotion.(1)

M. DUBRUEIL having attempted to give a definition of Potts' disease, entered into some considerations respecting its morbid anatomy. He began by putting the question, what is the most frequent seat of this affection? He answered, by asserting that it is certainly in the dorsal region, and the reason he assigns for this predilection is, that in this region there are to be found the greatest number of vertebræ. After this region, in the order of frequency, comes the lumbar region, and lastly the cervical region. Potts' disease, he continued, may be represented by a series of anatomical lesions. Thus, the vertebræ may be affected by tuberculisation, osteitis, or caries. Tuberculisation of the vertebræ has been elaborately described by Delpech and Nélaton. According to the latter eminent surgeon, this morbid condition alone of the vertebræ, would constitute what is called Potts' disease. But this, M. Dubrueil states, is an error, and is not to be wondered at as Nélaton was not quite familiar with the use of the microscope. M. Nélaton certainly described two sorts of tubercles of bones, viz., the infiltrated and the encysted; but the latter form could never be shown, and what appeared to him to be true tubercle, was tubercle that had reached its last stage, and in process of granulo-fatty degeneration. If we examine, with care, the points affected with agminated, confluent granulations, we shall find a yellow spot in them. This is the commencement of the stage of regression. If the tuberculisation is not too extensive, we shall find a red circle of osteitis around the yellow spot; but if the masses of tubercle are numerous, the osseous tissue, which is profoundly affected in its vitality, does not present the red circle. The mechanism by which the destruction of osseous tissue, ending in the formation of a cavity takes place, is very simple: the spinal marrow undergoes granulo-fatty degeneration; the osseous tissue affected by osteitis is destroyed, little by little, all the parts affected by this degeneration are eliminated, and thus are found cavities in the thickness of the body of the vertebræ.

As for osteitis, M. Dubrueil did not dwell much on this form of the affection, as he did not consider it its proper place. He, however, recalled to mind the production of the embryonic cells in the Haversian canals, in the medullary canal, and under the periosteum, which are characteristic of osteitis. Under the influence of this proliferation, the Haversian canals become increased in diameter; the osseous tissue becomes rarefied on the one hand, while on the other, the production of new osseous tissue takes place in the part affected with osteitis.

We next come to caries. This, with tuberculisation, is the most frequent cause of Potts' disease. In a clinical point of view, it is characterized by suppuration and friability of the osseous tissue. In a physiological point of view, there is the transition of the osteoplastic condition to that of fat, with modification of the walls of the bony cells.

Potts' disease, which often affects only one vertebra, may attack several vertebræ, even as many as eight, as was observed by Nélaton. In one extraordinary case, the twelve dorsal vertebræ were successively destroyed. This fact, of which the authenticity is incontestable, is due to Michel of Nancy. The caseous matter with which the cavities are filled, is only to be found in the fresh state. These cavities have no proper boundaries. They are limited by the surrounding parts, bones, ligaments, aponeurosis, muscles, &c., and this is the starting point of abscesses by congestion, so characteristic of the affection.

Up till now we have been considering the affection as it occurs in the body of the vertebræ. The lesions which are to be found in the other osseous parts of the vertebral column, not having the same consequences, do not in reality constitute Potts' disease. There is, however, one variety which ought to be noticed: it is that in which the lesion is to be found in the fibrous element, that is in the intervertebral disk. When two vertebræ are affected, the vertebral cartilage is more or less implicated, sometimes even destroyed, or perforated, as if with a punch. This lesion was particularly studied by Ripoll, of Toulouse, and he was the first who described this affection of the vertebral cartilages as constituting a form of Potts' disease of the spine, to which he gave the name of vertebral polyarthritis. Broca has since described the affection, but there still remains much to be done. M. Dubrueil then described the various forms of abscesses by congestion, as they occur in Potts' disease, but which need not detain us here. He then referred to the gibbosity which characterizes this affection. This, he added, was rather difficult to define, but the word gibbosity simply means a hump or protuberance. The deviation of the spine is named after the direction it takes. Thus, when the convexity is directed forwards, it is termed lordosis; laterally, scoliosis; and backwards, cyphosis. Other diseases may also give rise to deviation or curvature of the spine, but we have to occupy ourselves here only with the gibbosity connected with Potts' disease. The deviations observed in this affection are of divers character; some of them are commonly met with, while others are rare. The most common is the angular cyphotic form. The mechanism of this variety is thus explained: the bodies of the vertebræ being destroyed by one of the processes mentioned above, the upper part of the vertebral column sinks downwards, owing to the insufficient resistance of the bodies of the vertebræ. From this results an angular projection, formed behind by the spinous processes of the vertebræ. This projection is most marked in the dorsal region, this region presenting normally a curvature with the convexity directed posteriorly. Moreover, we should also take into account, the position of the spinous processes of the dorsal vertebræ, which are very long, and inclining downwards. The form of the angle varies from that of a very obtuse to that of a right angle. This deviation persists even after cure, as the latter takes place by the soldering of the bodies of the vertebræ together; a second variety of gibbosity is met with in vertebral polyarthritis. In this affection, the bodies of the vertebræ are not destroyed as in the preceding case, but they are merely brought nearer each other by

(1) *Continued from page 94.*

the destruction of the intervertebral substance which separates them. Hence, the gibbosity is not angular, but simply rounded. A third variety consists of the lateral deviation. This variety is rare, and is produced by the destruction of the lateral portion of the vertebra, which results in an inclination in that direction. Among the bony lesions of Potts' disease may be mentioned an alteration of the pelvis, which was particularly described by Chantreuil in his thesis. The alteration consists in a widening of the inlet of the pelvis, while, at the same time, there is narrowing of the outlet, which latter affects principally its tranverse diameter, and which is due to the approximation of the tuberosities of the ischium. This deformity might be a cause of dystocia, and ought to be borne in mind by Accouchers. Finally, when Potts' disease affects the dorsal region in particular, compensatory curvatures are formed in the opposite direction, which tend to restore the centre of gravity between the inferior extremities. But the vertebral column is not the only part affected in Potts' disease. The sternum becomes involved, and through it the thoracic cage becomes profoundly modified in its configuration in such a way that there is a second gibbosity formed by the curvature of the sternum. But what strikes one most in this deformity is the apparent lengthening of the ribs, which is simply due to a modification of the arc formed by the ribs. In Potts' disease this arc is lengthened, that is to say, the curve described by the ribs forms part of a circle of a larger radius than the curve described in the normal condition.

(To be continued).

Extracts from Journals.

EXPERIMENTS ON THE ELECTRICAL IRRITABILTY OF THE SURFACE OF THE CEREBRAL HEMISPHERES. (1. Prof. L. Hermann, *Pflüger's Archiv.*, 2tes *Heft*, 1875. 2. Dr. Otto Soltmann, *Centralblatt.* No. 14, 1875.)—Hermann's experiments were undertaken with a view of determining how far Fritsch and Hitzig are justified in their conclusion that the results in their experiments are due to the direct stimulation of superficially placed motor centres and not to stimuli conducted to deeply-lying centres. He controverts the idea that owing to the close proximity of the electrodes to one another the presence of deeply-passing currents may be denied; and he adduces the results of his own experiments to refute the deductions drawn from the sharply defined limits of the specific irritation-areas. These experiments, seven in number, were made on middle-sized dogs. In each case the position of the principal specific irritation-areas was determined. This was found to differ somewhat in the various individuals. Each area was well defined for any given intensity of current, but an increase in this latter was accompanied by a corresponding increase in the area. The intensity of current, whether constant or induced, necessary for the production of the required results was always surprisingly great. The special experiments were all made on the irritation-area for the hind leg. The unexpectedly steady continuance of the results, even when the surface had become dry, gave Hermann the cue to his further experiments. He cauterized the area in one case with strong nitric acid, and in another with acetic acid containing potassium ferrocyanide. Even after this, which was subsequently found to have destroyed the outer third of the grey substance, the results on irritation remained unaltered. In other experiments a cylinder of brain substance was separated from its surroundings by the use of a brass cork-borer. The usual results were still always producible, but required a somewhat intensified current for their production. The cylinder was afterwards separated from its deep connections and removed. The results were then also constantly produced, whether the electrodes were placed in the pit or on the surface of its margin. In the seventh experiment the area was cauterized with pure nitric acid, and the burnt tissue subsequently removed by the knife. This double process was then repeated several times until there was an excavation of one cm. deep. The results of electrical irritation remained unaltered. Hermann concludes that the theory of these superficial areas being motor centres is untenable. Apart from the generally received opinion that a motor centre can never be recognized by direct irritation, the fact that the phenonema of motion are producible after the surface has been destroyed, requires for its explanation the admission of a conductibility to a deeply-seated centre, and therefore the necessity for believing in the motor centre on the surface vanishes. He furthermore noticed that in some cases a sulcus traversed the centre for the hind leg, while in others no such sulcus existed. The actual size of the area, independent of the sulcus, was in all cases as nearly as possible identical. This, according to Hitzig's hypothesis, offers us either horn of the dilemma, namely, either that the centre for the hind leg is enormously greater in those individuals in which the sulcus exists, or that the surface of the sulcus has nothing to do with this special function, but that we have the centre for one function divided into two distinct parts by that for another. Soltmann, in a "preliminary communication," briefly records the results of his experiments on young puppies. 1. That electrical irritation of the surface of the hemispheres is without result in newly-born animals. 2. That the results are first observable in 9-11 days after birth; and 3. That the irritation-areas vary—they are not the same in young animals as in adults(1). R. J. H.

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, April 17th, 1875.

ROBERT McDONNELL, M.D., F.R.S.,
President, in the Chair.

Aneurism of Thoracic Aorta—Acute Miliary Tuberculosis.

DR. HAYDEN said that the subject who furnished the pathological specimens he exhibited was a labourer, æt. 54. He had been intemperate, but was generally healthy. Two years previous to his admission into Hospital in February last, he had bronchitis and slight hæmoptysis. His voice subsequently became husky and a fortnight before admission, he noticed a prominence in his chest. His breathing was easily accelerated, and there was a marked stridor from below. The right pulse was not so strong as the left. Occupying the second right intercostal space was a conical, yielding and pulsating tumour, two and a-half inches in diameter and half an inch in vertical projection. On each side of the tumour there was percussion-dulness to the extent of two and a-half inches. On auscultation, the "back-stroke" was well marked. Other physical signs of aneurism were at this time absent. The fourchette of the sternum projected and was dull on percussion; there was a distinct tracheal sound audible here, and in the right scapular region the respiration was bronchial. Dr. Hayden exhibited sphymographic tracings of both radial pulses, and observed that while they both presented a dicrotic or even a hyperdicrotic character, there was very little difference in range between them. Subsequently the right pupil became

(1) For further information regarding recent investigations on the above subject, *vide* Professor Purser's report on Physiology at p. 21 of this volume.

extremely contracted, there was ptosis of the right eyelid, and œdema of the same side of the head, face, and neck. The right pulse also became very feeble, and the tumour increased considerably in size; a soft and yielding nipple-like projection forming on its surface. A double impulse was perceptible in the tumour, and a double sound was also audible in it; the first sound being less pronounced, and the second sound very sharp, compared with the cardiac sounds. The right clavicle was now dislocated upwards, and the sternal attachment of the sterno-mastoid muscle was perceptible above the sternum. The patient died on the 10th April from asthenia. On *post mortem* examination it was found, with surprise, that there was acute miliary tuberculosis of both lungs. No caseous nodule was anywhere discoverable. The heart was large, flabby, and soft. The right ventricle was dilated, and the left hypertrophied. Just above the valves, the atheromatous aorta was enormously dilated. A large aneurismal tumour, the size of a fœtal head, sprang from the transverse portion of the arch. The descending cava was pressed upon, and the posterior surface of the sternum and cartilage of the first rib absorbed. The arteria innominata and left carotid sprang from the aneurism, but, as pointed out by Laennec in these cases, the subclavian was free. The right pneumogastric nerve was greatly hypertrophied. There was distinct œdema of the glottis: a condition rarely met with in these cases. The sac was occupied by a large, laminated mass of fibrine, resembling a hollow sphere, which at one point had become detached from the sac-wall, the blood dissecting this shell of fibrine from the interior of the sac, through the anterior wall of which it had subsequently burst, thus constituting a diffused, false, extra-thoracic aneurism, which at one point was covered only by the integument. The inequality of the respiratory murmur noticed in the different lobes of the right lung, was explained by the fact that the secondary superior branch of the right bronchus was alone pressed upon by the aneurism.

Fracture of the Neck of the Femur.

Prof. BENNETT exhibited three specimens of this fracture, in which exceptional conditions existed; namely, inversion of the limb, in two cases, and, in the third, bony union of an intra-capsular fracture. Case 1 was one of united extra-capsular fracture, in which the lower fragment was displaced in front of the upper one; the accident simulated a dislocation on the dorsum ilii. In Case 2, one of intra-capsular fracture, the limb was inverted, and freely movable in every direction, except outwards. In this instance no union, except by fibrous tissue, existed, the lower fragment, displaced upwards by complete absorption of the cervix, had produced absorption of the upper edge of the acetabulum, and eversion was prevented by its close contact with the ilium. Case 3 was one of bony union within the capsule, subsequent to intra-capsular fracture. The fracture presented characters identical with those already described in the specimens presented to the Society by the late Professors Adams and Smith—characters existing in all the recorded cases of this variety of the fracture; namely, impaction of the lower fragment into the upper, with moderate eversion of the lower fragment.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, 14th April, 1875.

JAMES F. DUNCAN, M.D., President, in the Chair.

Notes on some Diseases of the Skin—(a) Favus; (b) Erythema multiforme.

DR. W. G. SMITH said that in this paper he proposed to bring before the Society some cases which derived their interest, not so much from their rarity as from their exhibiting some features, which were of practical consequence as regards diagnosis. Favus or tinea favosa was of extreme rarity in this country; a fact which should be insisted on in reference to diagnosis, for it is not at all impossible for one not familiar with the disease to confound an old dried impetigo of the scalp with the amorphous crusts of the diffused stage of favus, or the microscope may be requisite to fix the diagnosis between it and psoriasis. In the majority of instances, favus is restricted to the head; more rarely it occurs on the smooth surface of the body and the nails, to which parts it is almost invariably transferred from the head by scratching. The original, and, in most recent cases, the only habitat of the achorion fungus is the hair follicle. Dr. Smith then proceeded to detail the history of three cases of favus. In the first the head, trunk, limbs and nails were affected, and in the second and third the epidermis alone was the seat of the disease. In neither of these two cases did the disease spread, and no source of infection was elicited. The treatment, which easily effected a radical cure, was the use of a lotion of perchloride of mercury (½ gr. to ℥i), subsequent to the removal of the crusts by poulticing, and afterwards carbolic ointment. The resemblance of the circular, red, scaly patches, observed in one case, adjoining the pathognomonic yellow favus cups on one of the patches reminded one of ordinary ringworm. This raised the question whether favus, or the honeycomb ringworm, owns the same parentage as common ringworm, or, in other words, can favus inoculation give rise to tinea circinata and tinea tonsurans, the common ringworm of the body and head? Dr. Smith did not think that sufficient evidence has yet been adduced of the transmutability of favus. Those who maintain that favus in a lower animal can induce tinea circinata in man—*i.e.*, who believe in the identity of the fungi, should be prepared to show the converse also—viz., that tinea circinata in the lower animal can by inoculation cause favus in man. The matter can be definitely settled only by careful inoculation experiments; and in support of the view that favus will invariably be found to give birth to favus, and never to tinea circinata. Dr. Smith mentioned that he had inoculated his own arm and that of Dr. Charles Ball, with true favus *débris*, and in due time several indubitable favus cups were produced, but not ringworm. Having related some instances, in which favus was contracted from cats and rats, the author concluded that it was important to remember that the early stage of favus closely simulates, and may be mistaken for common ringworm, and in doubtful cases the practical lesson is that energetic measures should at once be taken to stamp out the disease, lest an obstinate and disgusting affection be allowed to implant itself. Dr. Smith next related a case of erythema multiforme, occurring in a man aged 41. The eruption was nearly general over the trunk and extremities. It presented great varieties of appearance. At some places there were merely a large number of elevated flattened distinct papules crowded together (E. papulatum), at others the eruption presented the appearance of circular erythematous patch fading away in the centre (E. annulare); at other places the pinkish rim assumed a curious and grotesque variety of form, presenting a serpentine and gyrate appearance (E. gyratum). Seated on the margins exclusively of the patches, appeared in most situations a number of close-set but distinct small vesicles containing a whitish turbid fluid. Six days from its first appearance the eruption began to fade where it first came out—viz., on the forearm, and the skin commenced to desquamate, slight yellowish pigmentation remaining behind. Although the development of small vesicles upon the red patches was a noticeable feature in this case, the reasons for diagnosing it to be an erythema and not a herpetic eruption,

might be enumerated as follows:—(1.) Its abrupt commencement and characteristic outbreak on the backs of the arms and hands. (2.) The order of its progress. (3.) Its precise and accurately-marked symmetry. (4.) The consequent pigmentary stains and fine desquamation. (5.) Its short duration and spontaneous subsidence. This case exhibited all the stages of gradation from the simple erythema papulatum to the highest grades—viz., erythema gyratum, and thereby pointed explicitly to the essential oneness of all the intermediate forms.

Dr. FOOT, with reference to the interesting point alluded to by Dr. Smith, viz., the communication of ringworm by favus, exhibited two mice preserved in spirit which were affected with favus on the ear and face, and which there was some reason to believe had had something to do with spreading ringworm in a barracks in Dublin. Several of the soldiers had what was stated to be ringworm (they were not seen by Dr. Foot), and in the quarter occupied by them were several of these diseased mice, and also a cat on whom Dr Foot recognized favus. Dr. Foot was inclined to agree with Dr. Smith that favus can only produce favus, and that the more careful and accurate the observations made, the less they would hear of the transformation of this disease. It was believed, by some, that the spores of these low fungi often were influenced in their development by the soil they fell upon, and that peculiarities in the constitution of the person might have this effect.

After some remarks from Drs. MACSWINEY, H. KENNEDY, and SIGERSON, Dr. SMITH replied, observing that it was a singular fact that favus in the lower animals should be so much more destructive than in human beings.

Pythogenic Pneumonia.

Drs. T. W. GRIMSHAW and J. W. MOORE presented a very valuable paper on this subject, which was read by Dr. Moore, and illustrated by several statistical tables and diagrams. In the introductory portion of the paper the authors stated, that contrary to what might *a priori* be expected, pneumonia exhibited a tendency to prevail in the warm season of each year. This was shown by a reference to the Returns of the Registrar-General for Ireland, the deaths from pneumonia and bronchitis in each quarter of the year being contrasted. An analysis of the returns of deaths from the two diseases in Paris for seven years, showed also a noticeable close correspondence. The object of the present communication was to endeavour to prove that the remarkable differences which were shown to exist between the percentages of cases of bronchitis and pneumonia at different seasons, do not depend exclusively on meteorological conditions; and further, that the type of summer pneumonia is essentially different from that of winter, or what may be termed true or idiopathic pneumonia. Having given many bibliographical references to instances of pneumonia occurring in connection with bad hygienic conditions, enteric fever, escape of sewer-gas,(1) and during the prevalence of diarrhœa, the authors proceeded to give a clinical description of the affection, illustrated by the full histories of five selected cases, which had occurred under their care. The points of difference in the clinical history of this disease from true pneumonia, appeared to be its extremely sudden invasion, the frequency with which the disease is arrested in its early stage, and its being less liable *constantly* to attack the lower lobe of the right lung. In only one instance was there an opportunity of making a *post mortem* examination, and the appearances presented were not different from those of ordinary pneumonia in the second stage. The treatment which was found of most value was quinine in five-grain doses every third hour. Alcoholic stimulants and turpentine were employed with benefit in cases where there was much prostration. In the authors' experience, the disease was much more amenable to treatment than the other forms of pneumonia. The paper concluded with an investigation of the meteorological and epidemic conditions of 1874, when pneumonia prevailed so largely in this city. It was shown that a low temperature, a low humidity, and a scanty rainfall, influenced the prevalence of pneumonia. But in answer to the question—"Why does a warm, dry air increase pneumonia?" the authors would answer—"Because the *pythogenic* type of the disease depends on that pollution of the air by miasmata, which is greatest in warm, dry weather." In conclusion, the main points adduced were recapitulated as follows:—1. That the bibliography of pneumonia indicates the existence of a form of the disease which arises under miasmatic influences, and is contagious. 2. That this view is supported by the relations which exist between this form of pneumonia and certain zymotic affections—notably enteric fever and cholera—and by the resemblance between it and epizoötic pleuro-pneumonia. 3. That its etiology justifies us in regarding it as a zymotic affection, and in naming it "*pythogenic* pneumonia." 4. That pythogenic pneumonia presents peculiar clinical features, which enable us to distinguish it from ordinary pneumonia. 5. That much of the pneumonia which prevailed in Dublin during 1874 was of this pythogenic character. 6. That, whereas ordinary pneumonia is specially prevalent during a continuance of cold, dry weather with high winds, and extreme variations in temperature, pythogenic pneumonia reaches its maximum during tolerably *warm* weather, accompanied with a dry air, deficient rainfall, hot sun, and rapid evaporation.

Dr. MACSWINEY alluded to the liability of the occurrence of pythogenic pneumonia in such a city as Dublin, from the defective trapping of house drains; and referred to a series of cases occurring in one house, which he attributed to the inhalation of sewer gas.

Dr. H. KENNEDY said that anything which had a tendency to derange the health of the community would leave it open to disease, but whether it would tend to what the author of the paper had described as pythogenic pneumonia, was questionable. Pneumonia exhibited itself under a variety of forms. He had seen instances where the upper lobe of the lung, or one lung only, was attacked; it might also become epidemic, and he had seen the disease exhibit a very remarkable form of crisis by a most profuse perspiration. Sir Dominic Corrigan had described a curious epidemic, to which he gave the name of "blue pneumonia;" there was very little pleuritis, and the lung was solid and blue. This affection was not confined to children. As he remembered having pointed out to Dr. Grimshaw, certain cases of pneumonia would end in typhoid fever, and the moment the typhoid fever occurred the pneumonia rapidly disappeared.

Dr. GRIMSHAW said the observations of Dr. H. Kennedy carried out the views expressed in the paper. The statement that pneumonia presented itself under a variety of circumstances and different forms, was what he and Dr. Moore affirmed, and in their paper they endeavoured to distinguish what was the particular group of cases, or one form of the disease, which they believed arose under these particular circumstances. Modern works did not recognize this particular form of pneumonia, and in their paper they had endeavoured to distinguish it and to give it its separate place. With regard to treatment, the influence of quinine in this disease was very remarkable, and pointed, to a certain extent, to its miasmatic origin. He had never found quinine in the pneumonia of winter as good as in the pneumonia of summer, but in the latter it was most efficient. It appeared to arrest the disease.

(1) *Vide* IRISH HOSPITAL GAZETTE, Vol. II., p. 239.

IRISH HOSPITAL GAZETTE.

VOL. III.] DUBLIN, MAY 15, 1875. [No. 10.

Hospital Reports.

MATER MISERICORDIÆ HOSPITAL.

CASE OF TRAUMATIC TETANUS.

Under the care of Mr. P. J. HAYES,
Surgeon to the Hospital.

(Reported from Notes taken by Mr. HARTIGAN, *Resident Pupil).*

H. G——, aged 40 years, driver of a coal dray, was admitted to Hospital on the 27th February, and gave the following history so far as injury and surgical affection are concerned. He travelled to Maynooth with a load of coals on the 19th February, was all day and night on the road exposed to cold and wet, there being a continuous fall of rain and sleet. On the night of the 20th he drank to excess, and taking off his boots he placed his feet on the bars of a grate and fell asleep in that position before the fire—probably the fire was not strong at the time—and he remained so until early the next morning, when he felt his feet a little sore, and they seemed to be swollen, but he put on his boots and set out on his return journey to Dublin. The 21st being also a wet day he drank again to excess, and the following day, though he felt his feet very sore, he worked and attended to his business. For three days he continued working without seeking medical advice. He then felt unable to walk and sent for a Dispensary Doctor, who prescribed some purgative medicine, and ordered stupes and poultices to the feet. The toes were painful and showed evidence of having been severely burned. The patient still suffering, the gentleman whom he consulted advised him to apply for admission at some Hospital, and consequently he became an inmate of the Mater Misericordiæ Hospital on the 27th. He stated that his general health was good and he was not suffering very much pain.

On examination the toes of his left foot appeared to have been regularly "baked." The right foot was less severely burned. The ungual phalanges of the left toes were quite charred, and the great toe of the right foot burned down to the tendons, but still the man felt comparatively little pain. As a local application, some stimulating ointment—a mixture of elemi and resin ointments—was applied, and the patient was ordered full diet, together with two ounces of whiskey and a pint of porter in the day.

On the 1st March, the feet felt very painful; the phalanges of the left great toe were becoming detached at the metatarso-phalangeal articulation. There was also profuse suppuration attended with fœtor. On that day fearing the advent of tetanus, he was ordered pills, each containing one grain of extract of conium, $\frac{1}{5}$ grain of the watery extract of opium, $\frac{1}{3}$ grain of the extract of hepatic aloes, and one grain each of capsicum and camphor; one of these pills to be taken every third hour; and here it may be mentioned that these pills were continued during nine days; they had the effect of relieving pain and promoting rest and sleep at night.

About the 4th March the patient complained of some dryness of the fauces, and on the 5th this sensation was more marked. He also complained of feeling cold, and as though he had suffered from a chill. He felt stiffness about the jaws and at the back of the neck. There was no difficulty in swallowing and no tetanic expression of the face at the time, but the pulse had increased in frequency from 72 to 90. About 7 o'clock on the evening of the 5th March, he spoke through his teeth as though the jaws were more or less clenched, and also the lips were pressed against the teeth, but still the patient could open his mouth to the full extent when requested to do so. On that night a hypodermic injection of about $\frac{1}{4}$ grain of hydrochlorate of morphia and $\frac{1}{10}$ grain of atropine was administered; also the dose of watery extract of opium in the pills was increased from $\frac{1}{5}$ grain to $\frac{1}{2}$ grain, and as regards stimulants he got six ounces of whiskey in the twenty-four hours. He had no pain in the legs; there was no contraction of the muscles of the back or neck at the time; the pupils were of normal size, but the pulse rose gradually to 116 per minute; perspiration became apparent towards evening, and during the night he perspired rather freely.

On the 6th March the pulse in the morning had fallen to 72; the patient spoke through his clenched teeth and with difficulty; when asked to protrude his tongue it was turned to the right, and he complained as though it was caught at the root on that side. The tetanic expression of the face had now become marked, risus sardonicus being evident; the pupils were slightly contracted. He was ordered $\frac{1}{4}$ grain of the extract of calabar bean every third hour, and also three times during the night $\frac{1}{6}$ grain of the same extract to be injected beneath the skin. Towards evening the diaphoresis again became marked, and the first sound of the heart was noticed to

be softened and prolonged; still no pain was complained of in the feet. Hypodermic injection of calabar bean caused some swelling and stiffness of the arm, consequently the morphia and atropine injection was administered at night. The patient had rather an uneasy time of it during the night as he slept for only about two hours, the pulse being 98.

On the morning of the 7th the pulse was 78, and the patient unable to swallow solids. He was perspiring freely, and could with difficulty open his mouth so as to cause an interval between the teeth of about four lines. In the evening the pulse was 80. During the night of the 7th and morning of the 8th he slept about six hours after a hypodermic injection of morphia and atropine, and the pulse in the morning was 80; the pupils were dilated, and now the patient complained of pain and startings in the left leg, and there was increased difficulty in swallowing. Hypodermic injections of calabar bean were again employed, $\frac{1}{3}$ grain being used three times daily, and he also was given $\frac{1}{2}$ grain doses of the same extract in pills every second hour.

On the 9th the patient stated he had slept well during the night; the morning was pulse 80. The wounds were dressed. The phalanges of the left great toe had separated, and the ungual phalanges of the other toes were quite bare and in process of being thrown off. Elsewhere very healthy granulations had sprung up, but the patient complained of startings about the great toe. On this day still there was a tendency to regurgitation of liquids during the act of deglutition, and also not only was stiffness complained of in the muscles of the back and at the neck, but there was also contraction of these muscles, producing a certain amount of what may be called cervical opisthotonos. The bowels acted freely, and the patient did not at any time suffer from constipation. He was ordered to have one grain of calabar bean in pill every hour. The hypodermic injections were not employed as they caused pain and swelling of the arm. The pulse towards evening rose to 100.

On the 10th the patient reported that he had slept badly during the previous night. The pulse was down to 76; stiffness of the muscles of the neck greatly increased, and he had a slight convulsive attack of tonic spasm about 10 o'clock at night. This was followed by profuse perspiration and considerable prostration. On the 11th no change occurred. On the morning of the 12th he stated he had slept well during the night; pulse was 96 and weak, the heart sounds were also very weak, the first sound being considerably prolonged; the muscles of the back of the neck very rigid, great difficulty of swallowing existed, and when he attempted to swallow distressing fits of sneezing occurred, attended with discharge of ropy mucus from the mouth and nares; very well marked spasm of the facial muscles appeared; when the clenching of the jaws set in the patient was given a wedge to insert between his teeth and keep the jaws from becoming closed, but on this day he removed the gag rather incautiously and the consequence was that he bit his tongue severely. Owing to the altered condition of the heart, and his general prostration, the calabar bean was omitted, from 10 in the morning till 10 at night, when half grain doses by the mouth were recommenced. He slept well during the night, having taken five of the pills.

On the morning of the 13th his pulse was 96 and very weak. During the day he became unable to swallow the pills, therefore half grain doses of calabar bean were administered hypodermically about six times, and he had one grain of the same extract in a nutritive enema. In the evening the pulse was 120, and a half grain dose of muriate of morphia was administered by means of the hypodermic syringe. He passed a quiet night, though he did not sleep much, and on the morning of the 14th when the feet were dressed, the ungual phalanges of the 2nd, 3rd, and 4th toes of the left foot came away, the wound looking very healthy. The pulse was 108 and very weak. He was ordered $\frac{1}{2}$ grain doses of calabar bean hypodermically three times during the day, and three grains in as many enemata. On the previous day, owing to difficulty of swallowing, and tendency to pharyngeal and laryngeal spasms, tobacco fomentations had been ordered and applied around the neck. At night six grains of quinine and one grain of extract of calabar bean were given. The patient was able at midnight to drink about half a pint of beef-tea; he also took some milk during the night, and fell asleep after having half a grain of muriate of morphia injected beneath the skin.

On the morning of the 15th the pulse was 80; no spasm had occurred during the night, and the hypodermic injection of calabar bean had to be stopped, as it caused considerable swelling and irritation. As a substitute, three hypodermic injections, each containing $\frac{1}{2}$ grain of muriate of morphia and about $\frac{1}{10}$ grain of atropine, were injected during the day. The patient became very restless towards evening; though he slept fairly he had several spasms during the night, which seemed to indicate that the calabar bean had kept them in check, as they came on when its administration was discontinued. The evening pulse rose to100.

On the next day the extract of calabar bean was mixed with glycerine, and fifteen drops of the liquid, containing about one grain of the extract, were given every hour. This was well borne. He had slight emprosthotonos, caused by contraction of the abdominal recti during the day. He could scarcely swallow any liquid; a few drops were the most that he could pass through the fauces and pharynx at a time. Tobacco stupes

were kept constantly over the abdomen. By using a solution made up of extract of physostigma, glycerine, a little sulphuric ether and water, the hypodermic injections were resumed. In the evening the patient was quite relaxed and able to take a cup of milk often during the night. He slept well, but perspired profusely. Nutritive enemata were continued.

On the 17th the morning pulse was 96, the patient able to swallow freely and quite relaxed; no spasm; took twenty-five grains of calabar bean extract in the last twenty-four hours; nutritive enemata continued; became very restless; in the evening spasm of the neck, mild. Hypodermic injections of half a grain of morphia at night did not bring on sleep. The pulse in the evening was 120.

On the 18th the pulse remained 120; the patient very weak; very severe spasm occurred at 10 o'clock in the morning, producing emprosthotonos of the lower part of the trunk and opisthotonos in the cervical region. The patient became quite livid. The paroxysm lasted about five minutes, then passed off, and the patient was able again to drink. At 1 o'clock he complained of intense burning all over, and was found trying to cool himself with a wet towel. The calabar bean was steadily pushed, so that he took fifteen grains in the following twenty-four hours, and about 6 o'clock he became quite relaxed and able to drink well. He slept quietly from 8 P.M. to 1 A.M., and he was able to take more than a quart of milk during the night.

On the morning of the 19th the pulse was 80; he was able to swallow freely. The nutritive enemata were stopped as he was able to take plenty of nourishment by the mouth. In the evening however one nutritive enema was administered, which contained in addition to beef-tea and egg, five grains of quinine and a drachm of sulphuric ether. During the day the patient took a quantity of beef-tea and more than a quart of milk. The risus sardonicus had considerably subsided. He was cheerful, and expressed himself as feeling "a new man." At 7 o'clock in the evening he was not so well; the legs became rigid, and he complained of the left foot being very painful, but there was no decided spasm. Morphia was administered hypodermically, and he slept till 11 P.M.; then he had a violent spasm similar to that already referred to. The pulse rose to 120 and was very weak. Then the violence of the attack subsided, and after half an hour another hypodermic injection of morphia was given and one of calabar bean. He slumbered for about an hour, but then awoke; the spasms now continued almost without intermission, though he was still able to drink at intervals. About 3 A.M. the resident pupil was sent for, and he found the patient with his mouth open, breathing heavily, and perfectly cold; the pupils of the eyes were contracted to the size of a pin's point; the pulse was 120; the action of the heart weak and slightly tumultuous. The patient was conscious, but unable to speak. At first Mr. Hartigan feared that he might have had an overdose of the calabar bean, but he was quickly undeceived, for on placing his hand over the chest a violent spasm occurred, both the cervical opisthotonos and abdominal emprosthotonos being very marked; the teeth again clenched; the man made an attempt to spit up, but could not; a collection of mucus produced rattling in the throat; his lips became livid, the mouth closed tight, the pupils were dilated, and death took place in about three minutes, evidently from laryngeal spasm.

Death thus occurred on the fifteenth day from the first symptoms of tetanus, and on the twenty-eighth day after the occurrence of the accident. The patient got, as nearly as could be calculated, about 98 or 100 grains of extract of calabar bean.

At no time had he pain about the scrobiculus cordis, and notwithstanding the profuse perspirations, sudamina were absent. Sections of the spinal cord were made by Mr. Coppinger, but no distinct morbid condition or structural change could be detected, either in it or in the corpora quadrigemina, which were also carefully examined.

Original Communications.

CASE OF ACUTE DESQUAMATIVE NEPHRITIS: CONVULSIONS—TREATED SUCCESSFULLY BY TURPENTINE AND VINEGAR.

By T. AGMON VESEY, M.B., Rostrevor.

PHELIX G——, aged 7 years, was brought to my Dispensary on the 15th December, 1874, on account of a "swelling of his face." On examining him, I found that the face was puffy, especially about the eyes, and also that there was some general anasarca, slight pitting on pressure on dorsum of feet. As scarlatina had been epidemic, I asked his mother whether the patient had complained of sore throat, or whether she had noticed any rash on his skin. She replied, "he never had no sore throat, and had not a smitch on his skin!" The urine was but very scanty (about ℥x in twenty-four hours), and smoky; sp. g. 1·010, full of albumen. With the microscope, blood corpuscles, casts, &c., were found. Suitable treatment was prescribed, and the mother was directed to keep the boy warm in bed, as serious consequences might follow. There was no appearance of desquamation of the cuticle.

Dec. 22nd.—I heard nothing more of him for a week, when I was summoned to visit him. On arrival, I found that he had been suffering from

convulsions for some two or three hours. The seizures came on three or four times in every hour, and were very severe. The left side was much more affected than the right—in fact the convulsions seemed unilateral.

The anasarca was very much increased all over the body. The urine had been almost totally suppressed. During the previous thirty-six hours not more than ʒiv (if so much) had been passed. This was of the colour of tawny port wine. The immediate treatment was a hot bath, with mustard, followed by hot stupes to loins, a brisk purgative, and a turpentine enema. Turpentine confection was also administered in fifteen grain doses, every hour, and vinegar and water (1 to 4) was given, *ad lib.*, as a drink. The bowels acted freely, and in three hours from the commencement of the treatment, there was an improvement; the convulsions were not so severe, nor so frequent. Chloroform was also tried, but I did not derive the benefit therefrom that I expected, so did not persevere in its use.

In twelve hours the convulsions ceased, and did not return. The turpentine confection was now given every third hour, and did not produce any strangury. The quantity of water was notably increased—six ounces in twelve hours. He drank freely of the vinegar and water, and was much pleased with it. He had very copious sweating, which continued for several hours.

Dec. 23rd.—To-day patient much better; pale and weak, but otherwise well; plenty of urine secreted, only a trace of albumen; *no blood or casts* could be found. From this date the convalescence was uninterrupted and complete.

I need not enlarge on the condition of the kidneys in this case. It will be sufficient to say that it was regarded as a case of masked scarlatina in the first instance, with the usual renal sequelæ from exposure to cold. This view is borne out by the appearance of scarlatina in a sister of this boy a few days afterwards.

The reasons for the employment of turpentine are too obvious to be commented on. The vinegar was given with the idea of making the urea-poisoned blood purge itself of the offending matter through the skin. I do not venture to say that the diaphoresis was *propter hoc*, though certainly it was *post hoc*.

In the current Number of *St. Bartholomew's Hospital Reports* will be found a very valuable paper by Dr. Reginald Southey, who prescribes sulphurous acid and compound spirit of horse-radish in acute Bright's disease. Of vinegar he says, "I do attribute her improvement very greatly to the large amount of *vinegar* in horse-radish sauce that this patient took; and oftentimes since, in the persistent sickness of the uræmic state, I have given the dilute acetic acid of the Pharmacopœia in drachm or half drachm doses, with almost invariable benefit."

My case occurred previous to the receipt of the above mentioned volume, but the treatment recommended is worth bearing in mind.

Original Lectures.

ON STONE IN THE BLADDER.

By HENRY GRAY CROLY, F.R.C.S.I.,
Senior Surgeon to the City of Dublin Hospital;
Member of the Surgical Court of Examiners, R.C.S.I.

LECTURE I.

GENTLEMEN—In illustration of the case of lithotomy you have lately seen, I am desirous, in order to afford you some practical instruction on a subject of so much interest, to devote a special lecture to the diagnosis of stone in the bladder, the operation for its removal, and particularly to the consideration of some points which are not sufficiently dwelt on in the class-books.

First, with regard to stone in the bladder. Without going into all the different varieties described by surgical writers, and the history of which you can read in the various surgical works, I wish to draw your attention to the lithic acid, the triple phosphate, the fusible, and the oxalate of lime stone. The lithic acid, the oxalate of lime, and the triple phosphate calculi, are the most frequent. You will be asked the difference between sediment, gravel, and stone. What is called *sediment* is an amorphous deposit in the urine. As you see in this specimen, it consists of a certain amount of phosphates and of purpurates. This deposit, of nearly a quarter of an inch in the bottom of the vessel, is a sediment; but as it is amorphous it does not form what is called gravel. In *gravel* there is a certain amount of sediment; it becomes crystallized, but it does not come under the denomination of true stone. Gravel is anything of a gritty nature coming away in the urine, of which this is a good specimen. When it forms a more solid substance it is *stone in the bladder*, such as you saw me take away a few days ago. The first question you would naturally ask would be, what causes stone in the bladder? I do not think anyone is able to give a clear answer to that question. The true cause, I believe, has yet to be explained. We know that in Ireland the disease is comparatively rare. In Scotland it is very common, and also in England; and certain parts of that country, *e.g.*, Norfolkshire, are remarkable for the frequency of cases of stone in the bladder. At the recent meeting of the British Medical Association, held in Norwich, Mr. Cadge, one of the leading Surgeons of the County, delivered an address on the subject which I read, hoping to find some cause assigned for the disease; but it appears that the Norwich surgeons know as little

on this point as ourselves, and are unable to give any satisfactory reason for the more frequent occurrence of the disease there than elsewhere. Some attribute it to drinking certain waters, but a very strong objection to that explanation is, that in Ireland children are more frequent sufferers from vesical calculus than adults are. It is difficult to explain why a child drinking the same water as his brothers and sisters should get stone at the age of four or five years, and that they should be exempt. In Scotland, another cause has been assigned. A dietary of porridge is common in that country, and some suppose that the use of oatmeal has an influence in producing the disease. I lately had a conversation with an old fellow-student, who has operated frequently for stone in India. He told me that in the Northern provinces the disease is general, and rare in the South, though the water is the same. On inquiring if there is any difference in the dietary, he said, that in the Northern districts wheat, and a peculiar bean called sahl, are ordinary articles of food, and that in the South the use of rice is more frequent. The sahl diet almost corresponds with the dietary of certain parts of Scotland. However, I believe that the cause of stone in the bladder is still a mystery and remains to be solved.

I shall now show you examples of different kinds of calculus in the stones which I have removed from the bladder. The first case which I operated on in this Hospital, some nine or ten years ago, was furnished this very beautiful specimen. It is what is called an *alternating calculus*, that is, composed of alternating layers. If you look at the section of the stone you will observe that the centre consists of a small piece of lithic acid, the next layer outside is composed of oxalate of lime, and external to that are the phosphates. The second case on which I operated was that of a child, five years old, residing in Kingstown. The specimen is an oxalate of lime or Mulberry stone, remarkable for its extreme hardness and roughness, which is one of the reasons why children suffer more from stone than adults. It is stated by all writers on the disease that oxalate of lime and lithic acid stones are formed in the kidney. If we trace his history, we find that the patient, especially if an adult, has been complaining of pain, for some time, over one kidney; that after much suffering, the stone, of a small size, passes into the bladder and there excites chronic inflammation; phosphates are added, and the stone increases in size. The next is a very good example of the phosphatic stone; I removed it from a man who came from Enniskillen. My reason for selecting lithotomy, and not crushing in that case, I shall explain when contrasting the two operations. The next I removed from a man resident in Dublin. It is evidently made up of triple phosphate, with a nucleus, I have no doubt, of lithic acid. These small portions of the stone which you here see are phosphates, removed, *post mortem*, from the bladder of a patient on whom I refused to operate. In this box I have the detritus or fragments of stone removed from the bladder of a man by the operation of lithotrity.

Let us now consider what are the symptoms that will justify us in concluding that there is stone in the bladder. One of the most common symptoms is difficulty of passing water, pain, and frequent micturition; so, if a little child is brought to you, and you are told that he has great pain in making water, and especially after the water has come from the bladder, you may suspect the presence of stone. He may, however, have great pain during the passage of water and not have a stone; suffering during and after the passage of water almost always refer to reflex pain. It is explained by the stone falling on a sensitive part of the bladder, the pain being transmitted along the course of the nerves. The pain is referred to the extreme end of the penis, although it is caused by the irritation of the bladder from the presence of the stone. Another symptom in the child is very remarkable—the habit of pulling the prepuce, for which he is frequently punished. The prepuce becomes much elongated, and the penis of a boy of five years may resemble one aged twelve or fourteen, so that to see an undue development of the prepuce would also lead you to suspect stone in the bladder. A little patient of mine, when making water, lay screaming out violently; and I have observed, in Hospital, that a child suffering from stone will, if allowed, make water lying on its back in bed; and, if you ask him to get up, he will roll from side to side, and at the passage of the last drops, will undergo violent agony, twisting and turning from the severity of the pain. When you observe the condition of the penis referred to in a child, your first inquiry should be to ascertain if he has a natural or congenital phymosis, because if such a conformation exists it may simulate stone by causing difficulty in passing water.

Another very common symptom is the bowel coming down during the attempt to empty the bladder, that is, *prolapsus recti*, which is sometimes less correctly called prolapsus ani. An adult, in addition to these symptoms, frequently suffers from pains referred to the soles of the feet. An over acid state of the urine often simulates stone; correct the acidity, by suitable treatment, and the symptoms will disappear.

Having laid the child on his back, you take a small sound and pass it in, and strike the stone. If he has congenital phymosis you must relieve him, either by circumcision, dilatation, or some

other method. Another condition of the child may be the existence of a polypus in the bladder. The polypus may become coated a little with phosphates, and simulate symptoms of stone in the bladder. Adults, too, may suffer similarly from the same symptoms, but they may be produced by stone in the prostate gland.

With regard to sounding, it should be arranged that the patient has held water for two or three hours previously; if he has not you must inject the bladder. This may be done by the instrument I now show you, which is known as Sir Henry Thompson's sound. It also acts as a catheter, and owing to its lightness, emits a very clear sound when the stone is struck. The steel sound is generally made with too long a curve. When you introduce Thompson's you can turn it in every direction, and it is more likely to hit the stone than an instrument with a long curve. In sounding for stone there are several deceptions. If you introduce the instrument too far you may hit against the tuberosity of the ischium or the sacrum, and then you may say "here is a stone in the bladder," but at the opposite side you will hear the same sound. In sounding there is one manœuvre very useful, namely, on withdrawing the instrument trying to catch the stone in the concavity.

In the case of the man whom I lately cut, I was able, in withdrawing the sound, to strike the stone more readily. An affection has been described by Guthrie (called "fluttering blows,") in which the bladder is thrown into a number of pouches, and its coats are somewhat thickened and contract on the instrument, so that a sound is heard which may be mistaken for that produced by a stone. If you have a difficulty in striking the stone, you should try the patient in various positions. The stone may be up behind the pubes. In one of the children on whom I operated here, the stone slipped up behind the pubes, and I only could get it out by giving him a slap over the region of the bladder, and then the stone fell down. In such a case, by introducing the finger into the rectum you may tilt up the stone and cause it to hit against the sound. But, I believe, that in addition to sounding for the stone, it is very necessary to grasp the stone, if possible, by the lithotrite, and measure it to give you an idea of the size of the stone. If you can move it in various directions, you may have no hesitation in saying "here is a foreign body measuring so many lines;" and furthermore, if there is a second stone, you are able to hit it against the other. I remember when sounding a man, on one occasion, having a ring on my finger; the instrument hit against the ring and emitted a sound; I did not hear it again. At another time, in sounding a man, who wore a pair of corduroy breeches with buttons, I heard a click, but discovered that striking a button with the instrument had caused it. I have made it a habit since to make a man let down his trowsers altogether, and I take off my ring. If the Surgeon is too confident he might cut a man who has no stone. The first point to ascertain is, whether there is stone in the bladder or not, and, if it exists, to satisfy yourself as far as you can as to its size.

(To be continued).

Progress of the Medical Sciences.

REPORT ON PUBLIC HEALTH.

By J. W. MOORE, M.D., M.Ch. Dubl.; Fellow K.Q.C.P.;
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PREVENTABLE DISEASE.

Two remarkable outbreaks of enteric fever, which have occurred within the past few months, should be recorded.

Outbreak of Enteric Fever at Lewes, Sussex.—In the end of July and beginning of August, 1874, enteric fever commenced to prevail in this town. On August 1st seven cases occurred, and during the following fortnight forty other persons were attacked. In the fortnight ending October 24th, 197 fresh cases took place, after which the epidemic subsided. Altogether there were about 450 cases and 27 deaths in a population of 11,000. So serious was the outbreak that the winter Assizes for Sussex were held at Brighton, and not at Lewes, the county town. Dr. Thorne Thorne was deputed by the Local Government Board to inquire into the causes of the epidemic. An admirable summary of his Report will be found in the *British Medical Journal*, November 28, 1874: p. 687. The outbreak was distinctly traced to *an intermittent water-supply*. Up to the end of October, one or more persons in twenty-seven out of every 100 houses having the town-water, which is delivered on the intermittent system, had been attacked; whereas only six out of every 100 houses having well-water had been affected. The incidence of the fever was thus nearly five times greater on the houses supplied from the town waterworks than on those having a private supply. The pollution occurred in the following manner:—Many water-closets were supplied directly from the mains, the water being admitted to the pans by simply turning a tap. These taps were constantly left *open*, so that when the water-supply happened to be cut off, foul-air was often sucked through them into the mains. It also appeared from the inquiry that the town-water had been polluted by the accidental admission of foul tidal water into the waterworks in July last—a circumstance which would explain the earliest cases in the epidemic. The direct service-pipes spoken of above existed in houses where the first cases of enteric fever occurred. The open pipe communicating with the mains passed into closet-pans containing the evacuations of enteric fever patients, so that it was almost impossible that particles of the diseased evacuations could escape being drawn into the mains. [Cf. also *Brit. Med. Jl.*, Dec. 12, 1874: p. 745, and *Practitioner*, May, 1875: p. 392.]

Enteric Fever at Over Darwen.—Dr. Stevens has recently reported to the Local Government Board (England) on the serious epidemic of enteric fever, which prevailed in the autumn of 1874. This was the second time in twenty years that enteric fever had become suddenly and most fatally prevalent in the town. Over Darwen lies in a valley among the uplands of Lancashire, is built on a gravelly subsoil, and consisted (in 1871) of 4,225 houses, inhabited by 21,273 persons. It has long been notoriously filthy. The *Practitioner* for April, 1875, gives the history of the late outbreak and of its source in Dr. Stevens' own words as follows :—

"In the first few days of October in the present year, medical practitioners observed an unusual number of fever cases coming under treatment; and within a fortnight or three weeks of the outbreak it was computed that some 1,500 cases of the disease were under treatment at the same time. One of the practitioners alone estimated the number on his lists at 600. It is important to observe, that all parts of the town have been infected—high and low, rich and poor. People living in the immediate neighbourhood of accumulated filth, and those inhabiting higher and apparently healthier situations, have alike succumbed to the virulence of the poison.

"In the present year no death from fever was registered between July 4th (when a very rapid death from fever is recorded) to October 8th. This was the first death in the present epidemic; and, since October 8th, the mortality has rapidly increased, the deaths by fever in successive weeks having been 2, 8, 13, 21; in November, 24, 18, 6, 5; and in the two weeks ending on the 12th of the present month, 5 and 6; since then, up to the 16th, there has been only one other death by this cause.

"The sudden and well-nigh universal distribution of the disease has pointed to some fresh and exceptionally widely-operating condition as its cause; a condition affecting, in common, people living in all parts of the town, and variously circumstanced in regard of the local filth conditions that at ordinary times operate in the production of fever. In the course of this inquiry there soon appeared reason for suspecting that this exceptional and common cause would be found in a special contamination of the general water-supply; and on investigation this appeared conclusively to have been the case.

"On the 11th September, a young lady, suffering from fever, was brought to Darwen, to a house on the hill-side overlooking the town. She died there on 12th October. It appears to have been from this one case that the great outbreak took its rise. The house is situated close to the sough by which the water for the town supply is conveyed into the service lodge. The excreta from this patient had been carried away by a water-closet, the drain from which discharged on to a meadow in front of the house, and passed in its course immediately over, and within two feet of the sough carrying the town water. The father of the deceased expressed himself as tolerably assured that no contamination of the water could have arisen by means of the drain in question, more particularly as the Water Company had some years since examined the drain channel here, and done what they considered necessary in order to secure the water against accidental pollution from this source.

"On examination of this drain it was found to consist of a stone sough, leading from the front of the house to the other side of the road, whence it was continued by some earthen drain-pipes a few feet down a bank, and then onwards under a foot-way by means of an iron pipe, the end of which furthest from the house was left open so that the sewage might flow out over the sloping meadow, stretching thence to the houses below. The part of this drain from the commencement of the iron terminal pipe is in relation with the public water-supply sough. On removing the earth above and around this portion of the drain, it appeared to have been fairly well laid, and between the iron pipe and the water sough some excellent puddling had been used, probably the work of the Water Company on the occasion of their inspection above referred to. This puddling, however, was confined to the space between the iron drain-pipe and the water sough. Further examination of the iron pipe showed it to be almost absolutely choked up, no fluid running through it except as the result of considerable pressure, and on similar examination of the earthen drain-pipes, they, too, were found to give little or no passage to sewage. This had evidently been the case for some time, and the sewage had found a way for itself outside and underneath the drain. Here the sewage had met the water sough, against which it had formed a kind of small cesspool, which was found to contain a quantity of black sewage matter. This matter, containing, be it remembered, the specifically diseased excrement of enteric fever, had, during the latter half of September, gained access to the interior of the water sough through faults in its imperfectly secured joints, and was, with the water, delivered to the houses of the town."

[On this outbreak, cf. also the *Med. Times and Gaz.*, Nov. 7, 1874: p. 523, and the *San. Record*, Jan. 23, 1875: p. 70.]

Diphtheria in New York.—An epidemic of this disease prevailed during 1873 and 1874 in the City of New York. The deaths in 1873 numbered 1,151; in 1874, between 1,800 and 1,900. Two important papers on the subject of diphtheria were read before the Public Health Association of New York, at a meeting held Dec. 10, 1874. The first was by Dr. J. Lewis Smith, on "The Causes and Nature of Diphtheria, with a review of the Bacterian Theory." The author accepted this theory with the reservation "that diphtheria is, in certain cases, a constitutional malady in its circumstances," a predisposing condition of the system being a factor of much consequence in the propagation of the affection. He observed that some of the first and most severe cases seen by himself in the epidemic of 1857 and 1858, had occurred in the upper part of the city (of New York), *along the old watercourses*, where, in consequence of street grading, water was stagnant and impregnated with decaying animal and vegetable matter. The Registrar of Births and Deaths, Dr. Elisha Harris, subsequently made a communication, entitled "Facts in the History of Diphtheria in this City and Country." He arrived at these practical conclusions :—1. If diphtheria has gained a foothold in any city or populous neighbourhood, it selects certain localities in which its persistence is specially marked, and its persistence, as shown by repeated outbreaks or continued prevalence, seems to hold an important relation to certain conditions of soil, drainage, and sanitary wants of dwellings, which admit of preventive measures. 2. The extension of the disease from one individual to another, and to entire households or families, and from family to family, and from place to place, are facts so well proved in the history of the disease that the entire separation of the sick from the well, at least of children sick with this disease from all others, should be regarded as a first-rate sanitary duty. 3. That the immediate sanitary as well as perfect medical care of every family exposed to it seems to be a duty required by every consideration of humanity and public health. 4. That a complete and exact record of diphtheria as it prevails in any locality is a duty of much importance to society. [Cf. *The Sanitarian*, Feb. 1875.]

Pythogenic Pneumonia.—In the *Medical Record*, March 13, 1875, Dr. W. B. Rodman, of Frankfort, Kentucky, gives an account of the prevalence of pneumonia in the Kentucky State Prison, under circumstances which point to a miasmatic origin for the dis-

ease. "The prison," observes the author, "is built on 'made ground,' in other words, on a reclaimed marsh. The cell-house, in my opinion, is the principal cause of the prevalence of pneumonia. Seven hundred men sleep in cells that contain not more than 300 cubic feet of air each. The building itself is imperfectly ventilated." He adds that the occupation of the prisoners (hackling, spinning, and weaving hemp) cannot be the cause of the affection, for "35 coloured female prisoners are engaged in spinning hemp, but *having large, well-warmed, and ventilated cells to sleep in, they have no pneumonia.*" As regards treatment, he met with most satisfactory results from the early administration of carbonate of ammonia and *quinine*.

Arsenical Poisoning by Articles of Dress.—Mr. R. R. Cheyne records, in the *Brit. Med. Journal*, Nov. 21, 1874, page 643, a case of arsenical poisoning in a boy, aged two years and four months, from wearing a ruby-coloured merino tunic. Dr. A. Duprè examined the frock chemically, and found that it was coloured with coralline, and contained ·048 grain of arsenious acid per square foot. As to the occasionally poisonous nature of coralline dye see IRISH HOSP. GAZ., Vol. II., p. 332.

Influence of Employments upon Health.—The *Medical Record*, New York, Nov. 16, 1874, contains a translation (by Mr. R. Percy Alden) of an important bibliographical paper, by Dr. Ludwig Hirt, of Breslau, on this subject. It treats of the effects of zinc vapours on workmen *(Brassfounders' Ague)*; also of the effects of vapours of salt (the air prevailing in rock-salt mines and in the boiling-houses of salt-works), oil-fumes, and fumes of turpentine, on the health of those employed in preparing these substances. The same Journal, for December 16, 1874, contains an article on the "Diseases caused by the Inhalation of those kinds of Dust whose Presence in the Pulmonary Tissue may be demonstrated." *Pneumokoniosis Anthracotica*, or the deposition of coal-dust in the lungs, is well described. In the *London Medical Record*, Dec. 9, 1874, Dr. W. Lomas epitomises a paper on this affection, which Dr. Proust recently communicated to the French Académie de Médecine. His treatise was specially devoted to the study of anthracosis among moulders in copper or bronze. The *Gazette Hebdomadaire*, Juillet 10, 1874, in reporting the meeting of the Academy at which M. Proust's paper was read, gives a historical sketch of the subject. This is from the pen of Dr. A. Dechambre, and is deserving of attentive study.

Cholera and Cemeteries.—Dr. Bidlot *(Ann. de la Soc. Méd.-Chir. de Liége*, pp. 221, 289; and *Rev. des Sciences Méd.*, Tome V., p. 252) records three sporadic cases of cholera in persons who were exposed to emanations from a cemetery in which cholera-corpses had been previously interred, an interval of two years having elapsed between the burial and the attack in one instance.

Epidemic Scarlatina.—See important articles by Dr. John W. Tripe, in the *Sanitary Record*, November 14, 1874, and May 8, 1875.

PREVENTION OF DISEASE.

The Relation of Ozone to Disease.—Dr. J. F. Baldwin (*Amer. Jour. of the Med. Sciences*, Oct. 1874, p. 416), concludes that "ozone influences the general health, only in so far as it purifies the air by destroying—not the living germs of disease, but the products of decomposition." "Beyond this," he adds, "all views concerning the action of ozone, as a cause, a remedy, or a preventive of disease, rest upon vague and unfounded hypotheses."

Railroad-Car Ventilation.—The *Sanitarian*, Feb., 1875, p. 491, describes a new method which has been lately tried in America. See also a paper on this subject by Dr. Theo. W. Fisher, of Boston, with chemical analyses by Mr. Wm. Ripley Nichols, in the Sixth Annual Report of the State Board of Health of Massachusetts, 1875).

Air of Theatres.—The *Medical Times and Gazette*[1]) gives the following abstract of a paragraph in *L'Union Medicale*, Jan. 14, 1875: p. 60. "*Le Journal de St. Petersbourg* publishes some interesting observations by Dr. Hubner on the progressive alteration the air underwent in the Marie Theatre. The experiment was made on December 1, in a central box of the second circle. The temperature rose from quarter of an hour to quarter of an hour, although the quitting the theatre between the acts contributed to introduce some fresh external air. At the rising of the curtain the temperature was 18° C.; by the end of the first act it had reached 24°, and 25° by the commencement of the second. The humidity of the air increased less rapidly, but yet in two hours it had increased by 30 per cent., and by the end of the fourth act it was greater than that of the external air. At the commencement the humidity was from 40 to 60 per cent., or such as may be found in healthy and well-ventilated abodes; but by the end it had reached 85 per cent., equalling that of abodes which exert a mischievous influence on their inhabitants. The carbonic acid had by the second act exceeded six times the normal proportions, being 1·9 per 1000 cubic metres. At the end of the performance it was 4·3 per 1000, constituting an atmosphere capable of producing toxical action on the lungs of people habituated to respire pure air."

Burial and Cremation.—The Sixth Annual Report of the State Board of Health of Massachusetts, which has just been published, contains a long article on "Cremation and Burial: an examination of their relative advantages," by Dr. J. F. A. Adams. The intrinsic value of this paper from its fulness and literary merit is enhanced by the addition of a complete bibliography of cremation, ancient burial customs, intramural interments, and miscellaneous subjects connected with the question of disposal of the dead. In connection with this, too, reference should be made to a leading article in the *Med. Times and Gazette*, Feb. 13th, 1875, in which Mr. Seymour Haden's improved method of inhumation is lauded in sensible and impressive language. There can be no doubt that if inhumation is carried out scientifically, with a due regard to sanitation and absence of the absurdly gloomy and antiquated observances which characterise our existing funeral rites, we shall hear very little of cremation, at least for many years to come.

Slaughter-houses.—The Metropolitan (London) Board of Works have, pursuant to the Slaughter-houses (Metropolis) Act, 1874, framed a number of By-Laws for the management of Slaughter-houses under the control of the Board. We copy some of these as given in the *Sanitary Record*, Nov. 14, 1874. "With respect to proposed new slaughter-houses the 'conditions on which the board will consider as to giving sanction to establish anew the business of a slaughterer of cattle,' are contained in six clauses to the following effect. 1. The applicant must furnish a plan of the premises and sections of the buildings (scale ¼ inch to the foot) showing the provision made or to be made, for the drainage, lighting, ventilation and water-supply: and also a key plan of the locality (scale 5 feet to the mile) showing the buildings adjacent to the premises. 2. The slaughter-house must be a detached building at least forty feet from any inhabited building, and not abutting as a public highway. 3. It must have an entrance apart from and independent of any shop or dwelling-house, and be properly lighted by lantern, sky, or side lights. 4. The floor must not be below the level of the outside road or footway. 5. The lairage must be

(1) Jan. 23, 1875: p. 108.

adequate, well drained and ventilated, separated from the slaughter-house by brick partition, and provided with all necessary means of communication. 6. The apparatus and tackle for slaughtering must be of the most approved character; and the premises must be in all respects in accordance with the general by-laws." . . . . "With reference to the construction of the building, in all slaughter-houses it is required that the *paving* be of asphalt, or of flagstones set on cement, and laid with proper slope and channel towards a gully. *Drainage.*—The slaughter-house must be effectually drained by an adequate drain of glazed pipes connected with the public sewer, unless the Board shall otherwise specially direct; and the gully must be trapped by an 'approved trap,' and be covered with a grating, the holes or bars of which shall not have any opening greater than ⅜ of an inch across. *Walls.*—The inner walls must be covered with hard smooth impervious material to the height of four feet at the least, which shall always be kept thoroughly clean and in good order and repair. *Ventilation.*—The slaughter-house must be well and thoroughly ventilated by openings, windows, or Louvre boards, or otherwise. *Water-supply.*—There must be an adequate cisternage and water-supply. In respect of new slaughter-houses, the arrangements will have to be shown on the plans. *Rooms* situated over a slaughter-house are not to be inhabited, and no rooms or lofts may be constructed anew over any slaughter-house. A water-closet, privy, cesspool, urinal, cesspool for blood, or any opening to such places, may not be constructed or permitted to remain or continue within the slaughter-house. No fowls, pigs, or other animals used for human food (except cattle about to be slaughtered) may be kept on the premises; nor a dog, unless such dog is well and sufficiently fastened and secured."

Liernur's System of Town Drainage.—A very elaborate description of this, the so-called pneumatic system of drainage, from the pen of Mr. Adam Scott, C.E., appeared in the *Sanitary Record*, November 21, 1874. "The first characteristic of this system is that the matter alluded to [*i.e.*, all putrescible matter of households capable of being conveyed by subterranean pipes] is removed out of the houses by atmospheric pressure, instead of by water, being drawn, or literally sucked, by vacuum power to a central building in the town where an air-pump engine works." The pipes which convey the matter from the houses to a receiving tank are five-inch cast iron socket pipes throughout, the "mains" being no larger than the branches. In the whole net-work of pipes there is no valve or other movable mechanism. "There is simply on every main-pipe one single ordinary stop-cock, which is turned by hand on the street, and when this is done all the closet-pipes of the houses connected with that 'main-pipe' (100, 200, or however many there may be) are emptied simultaneously." The closet-pipes are emptied simultaneously when this stop-cock is opened by a rush of air towards the receiving tank which has previously been exhausted. No fermentation or evaporation can take place within the pipes. The matter when collected is immediately converted into a dry substance called *poudrette*, by simply evaporating the water from it. No extra fuel is used for this process of evaporation or distillation. These are merely the broad principles on which the method is based, but Mr. Scott's paper should be consulted by those who desire a more thorough knowledge of Liernur's system, the great disadvantage of which would seem to be its costliness. Some large Continental towns are already drained in the manner described, and Petersburg is about to spend £4,000,000 in introducing the Liernur system.

Conviction for Impregnation of Soda-Water by Lead.—James Ewing, manufacturer of ærated waters, was charged at the Dumbarton Police Court last October with having sold a bottle of soda-water as genuine although it contained one-tenth of a grain of lead per gallon, and consisted simply of water charged with carbonic dioxide. The charge was brought under the "Food Adulteration Act." The accused ultimately pleaded guilty, and was fined *one shilling*, (!) with £2 10s. of modified costs.—*London Med. Rec.*, Nov. 4, 1874.

Manslaughter by a Midwife through conveying Puerperal Fever.—See *Sanitary Record*, Jan. 23, 1875. [Cf. also a leading article in the *Brit. Med. Jour.*, May 1, 1875.]

VITAL STATISTICS.

Statistics of Deaths.—At a monthly meeting of the Association of Medical Officers of Health, held October 17, 1874, Dr. Letheby, the President, read a paper on the estimation of the sanitary condition of communities, and the comparative salubrity of towns. He said that the common method of seeking to solve this problem by arguing from the death-rate, as usually calculated, is entirely fallacious. "In proof of this he alluded to the disturbing "effects of migration, the birth-rate, the proportion of the two sexes, and other circumstances in vitiating the results."(1) Dr. Letheby concluded his address by saying that "the sickness and mortality of young children, when properly estimated, are the signs of home influence; the like phenomena of adults are the indication of wholesome or unwholesome habits, occupations, &c.; and that the sanitary condition of a population can only be properly determined by reference to the statistics of disease, as well as of mortality, and that all the modifying circumstances of age, sex, migration, climate, season, &c., must be carefully considered."(2) Mr. John Hawksley then made some (to our mind) most unwarrantable remarks in depreciation of the vital statistics published by the Registrar-General for England. While we are quite ready to agree with Dr. Letheby in much of what he said with regard to the inadequacy of the existing system of registration, and to the necessity for a registration of disease and of conditions peculiar to individuals, locality, and climate as a basis of scientific vital statistics, we must take exception to the low value he assigns to death-rates. And we are supported in this view of the question by very sound authorities. Not to mention the Registrar-General himself, who makes a vigorous defence in his weekly Report for October 31, 1874,(3) the *Sanitary Record*,(4) *British Medical Journal*,(5) and *Practitioner*(6) all unite in questioning the validity of Dr. Letheby's conclusions, and in exposing his errors. A perusal of the articles referred to will be found of great interest by vital statisticians. [Cf. A paper by Mr. N. A. Humphreys on "The Value of Death-rates as a Test of Sanitary Condition."—*Practitioner*, Feb. 1875: p. 143.]

Statistics of Scarlatina.—Valuable contributions to our knowledge of the prevalence of scarlatina and of the laws it obeys are contained in the following papers—"Statistics of Scarlatina with remarks on Diphtheria," by Mr. H. Courtenay Fox;(7) "Epidemic Scarlatina," by Dr. J. Tripe;(8) "Scarlet Fever Preserves," by an anonymous writer;(9) and "The Scarlatinal Waves of 1841-1875," by Dr. J. W. Tripe.(10)

(1) *Sanitary Record*, Oct. 31, 1874: p. 305.

(2) *Loc. cit.*, pp. 307 and 308.

(3) His statement will be found reprinted in the *Brit. Med. Journ.*, November 7, 1874.

(4) Oct. 31, 1874: p. 310. "Dr. Letheby's Errors."

(5) Oct. 31, 1874: p. 561. "Dr. Letheby on Death-rates."

(6) Nov. 1874: p. 375. "Hygienic Sophisms."

(7) *Med. Times and Gaz.* Nov. 21, and Dec. 19, 1874: Pp. 577 and 680.

(8) *San. Rec.*, Nov. 14, 1875. Already referred to in this Report.

(9) *Practitioner*, Dec. 1874: p. 452.

(10) *Practitioner*, May 1875: p. 301.

Comparative Duration of Life in Men and Women.—See *Lond. Med. Rec.*, Mar. 31, 1875: p. 204.

The Arithmetic of Epidemic Progression.—The following paragraphs are from the *Practitioner*, April, 1875, p. 308:—"At the meeting of the Epidemiological Society on Wednesday, March 10, a highly suggestive paper was read by Dr. George Evans, on some arithmetical questions connected with the rise and progress of epidemics. He commenced by stating that his investigations had been suggested by some calculations made by Dr. Farr in the beginning of 1866, of the probable course of the cattle plague. Dr. Farr had shown that the real law of this epidemic implied that the ratio of increase went on rapidly decreasing, until the ratio itself was a decreasing one. Applying the law of gradually decreasing increase obtained from the earlier weeks of the epidemic, he calculated its probable course, which very nearly resembled its actual course. Dr. Evans thought it would be interesting to ascertain if this method could be applied to other epidemics, and whether we could at any early part of their course predicate the period of their culmination and the rate of their decline; he therefore investigated some epidemics of which the progress is known, with this view. Dr. Evans described in the following terms the process of calculation employed by Dr. Farr.

"Take nine weeks of the early course of the epidemic, in three groups of three weeks each: find the average deaths per week in each group: find the number by which you must multiply the first average to obtain the second, and the numbers by which you must multiply the second average to obtain the third: or, as simpler process, take the difference between the logarithms of the first and second averages, and between the logarithms of the second and third. The first of these differences may be called δ^1, and the difference between these two differences, which should, to bear out this theory, be a negative quantity, may be called δ^2. We have now the data for constructing the series. The average of the first three weeks is the starting-point, and represents the centre week of those three. The next number in the series is obtained by adding to the logarithm of our first number a number composed of $\frac{\delta^1}{3} - \frac{\delta^2}{9}$ remembering that δ^2 is a negative quantity; we continue to add to the logarithm for each place in the series a number gradually diminished by the addition in each place of $\frac{\delta^2}{9}$: after a time the number to be added becomes negative, and the series gradually diminishes."

Dr. Evans then applied this method to the cattle-plague of 1865–66, the cholera-epidemics of 1849 and 1854, and the scarlatina-epidemics in London during the years 1840–71, and in 1874. The results were to a great extent satisfactory.

Reviews.

The Nature and Varieties of Destructive Lung Disease, included under the term Pulmonary Consumption, as seen among Soldiers, and the Hygienic conditions under which they occur. By FRANCIS H. WELCH, F.R.C.S., Surgeon, Army Medical Department, and Assistant Professor of Pathology, Army Medical School, Netley. Large 8vo., pp. 126.

THIS work, which was the Alexander Prize Essay, December 1872, is one, the execution of which fully bears out its title, and every page of which has the impress of original observation and accurate research. It is divided into two Parts:—Part I. deals with (*a*) the varieties of Pulmonary Consumption as seen among soldiers. (*b*) Their nature. Part II. with the Hygienic conditions under which they occur. In the first portion of the essay the author describes the varieties of lung destruction observed in the army, as exemplified in a given number of cases of consumption spread over a period of eleven years. These cases of destructive lung disease have been arranged in groups according to the nature of the diseased product, and the phases of evolution of the lesion, and in varieties according to the differences in the early periods of their history, and the clinical and pathological phenomena which accompanied the progress of the case. The author considers the main mass of military consumption to be essentially due to local action, and dependent on external causes; the influence of a prior inherited diathesis as explanatory of the lung destroying lesion has been excluded in the majority of cases as wanting in substantiating elements. As to the Hygienic conditions under which consumption in the army occurs, Surgeon Welch discusses the influence of syphilis as seen in "syphilitic gummatous phthisis;" also the cases which originate in prior textural derangements of some portion of the body other than the pulmonary organs, but both of these classes of causes are, in his opinion, of comparatively slight importance in comparison with those dependent on the exigencies of military service, an etiological group represented in numerical frequency by a per centage of 73·81. The term "exigencies of military service" comprises some of the peculiar and most constantly operating conditions of a soldier's life—vitiated barrack atmosphere, chest constriction, and climatic variations. The author considers that in round numbers half the lung destruction in the army is connected with the vitiation of the air of respiration. In judging of the influence of "Barrack habitations," he says, we must especially bear in mind what the barrack room actually is to the soldier. "It is never vacated; common to a large number, and not uncommonly the only place of resort except the canteen; more or less of the men are invariably present in it, engaged in some one or other occupation; when the the soldier leaves the parade he returns to it; it is a day-room, a dormitory, the bed clothes unaired and with the foulness of night accumulations, are rolled up and retained in it until required for use the succeeding evening; eating, smoking, clothes' and accoutrements' cleaning, all go on in it; as soon as darkness sets in the combustion of candles or gas add their impurities to that of the pipe and respiration before the soldier 'turns in,' at a given hour, to bed, when the urine tub not uncommonly further assists. Hence no opportunity exists for the thorough dissipation of the night's impurities before they are renewed; vitiation to a varying degree is constant, and the soldier must pass the maximum hours of the day in it. The room is ordered to be washed once a week, dry scrubbed on the other days; practically it is swamped in water, and then an attempt to dry it is made by a large fire; this excess of moisture cannot but add to the general comparatively high hygrometric state of the air, intimately associated with the organic vapours, and acting apparently as their vehicle. The thorough dispersal of the organic matter of night, so difficult to get rid of, by flooding the room with air for several consecutive hours by window opening, is not practicable under existing circumstances. A barrack room atmosphere may be regarded as moist and foul, with the occasional adjunct of warmth." Phthisis and respiratory diseases have vastly decreased in the army during the last twelve years as compared with the former periods of rampancy of sanitary defects; still various suggestions for curtailing the yet preventable major part of the lung destruction offer themselves, but the author evidently considers that the adoption of such is a very slow process. The Sanitary Commission, 1859, recommended 600 cubic feet as a minimum in barracks, 3 feet between

each bed, no urine tubs in rooms, a day room, thorough ventilation: yet, he asks, even in 1872, what proportion of barracks in the United Kingdom exemplify these essential points, or even one of them?

Myringomycosis Aspergillina (Fungus Ear Disease). By J. P. Cassells, M.D. Glasgow: Dunn and Wright, 1875: Pp. 15.

The varieties of vegetable fungi which have hitherto been found in the external auditory meatus are aspergillus flavus, glaucus, nigricans, and otomyces purpurea; also, more rarely, the penicillium glaucum, graphium, penicilloides, and trichothecium roseum. The first cases of parasitic ear disease reported were by Mayer and Pacini, in 1844 and 1851 respectively. Notwithstanding these earlier discoveries of ear fungus, the honour of a new discovery belongs to Schwartze, of Halle, who, in 1865, first called the attention of otologists to the existence and frequent occurrence of a form of ear disease of a parasitic nature. Dr. J. Patterson Cassells, of Glasgow, the author of the present paper, was the first who reported a case of parasitic ear disease in this country (*Brit. Med. Jour.*, May, 1874). It is impossible to speak with any degree of certainty, concerning the origin and development of these fungi. Wreden thinks the disease is more commonly met with in those who live in damp habitations, and he noticed a case of frequent relapse due to sitting at a window, the sides of which were abundantly covered with the aspergillus spores. Both he and Nötling have observed cases in which the disease followed the introduction of geranium leaves into the meatus for the cure of toothache. It has been a subject of discussion whether the fungus is directly causative or only a concomitant and aggravator of already existing disease, whether some peculiar condition of the tissues of the canal pre-exists, favourable to the germination of the spores once deposited, or whether certain diseased conditions of the tissues can give rise, *ab initio*, to these low forms of vegetable life. These are questions, which, for lack of evidence remain undecided. Wreden failed to propagate the fungus in a healthy ear. A case of ear disease due to aspergillus may be recognized—1st. By the subjective symptoms, which are those usually met with in cases of ceruminal accumulation in the auditory canal, but, in addition, there is *pain* of a deep burning kind, as if pepper grains were lying in the depths of the external meatus; this sensation is not increased by pressure upon any part of the external ear region, and is nearly always lessened or temporarily removed by injections of tepid water into the canal. 2nd. The objective signs, namely, the appearance upon inspection of the fungus growth in the meatus. The treatment of this ear disease consists in the complete removal of the fungus and the products of the inflammatory action it gave rise to, from the external meatus, and the prevention of the re-growth of the parasite. This is generally accomplished with ease by the free and judicious use of the syringe and tepid water, the cautious use of a suitable parasiticide, and restoration of the tone of the tissues of the external and middle ear, if the latter has become involved in the diseased process. Some observers declare that syringing with tepid water is sufficient to effect a cure, but Dr. Cassells would not trust to it alone, nor upon a *watery* solution of any of the numerous parasiticides, except perhaps hypochlorate of lime. He concurs in the opinion that of all parasiticides those into which the composition of alcohol entered were most effective; further, that this efficiency was in reality due to the spirit alone. Consequently Dr. Cassells has hitherto used alcohol, diluted or in full strength, and is satisfied with its action. The immediate subject of the paper is a case of aspergillus niger, the first observed in England. H. R. S.

Cholera: How to Prevent and Resist it. By Dr. Max von Pettenkofer. Translated (with Introduction and Appendix on the International Cholera-Conference of Vienna), by Thomas Whiteside Hime, A.B., M.B., &c. London: Baillière, Tindall, and Cox. 1875: Pp. 75.

The name of Prof. von Pettenkofer is that which is of all others most intimately associated with the modern scientific investigation of the causes tending to the origin and spread of cholera in western climes. A new work, then, upon this subject, with his name attached, needs but little in the way of recommendation to introduce it to favourable notice.

As one of the latest expositions of Pettenkofer's theory—a theory the result of more than twenty years' elaboration upon the question of the propagation of cholera—the present publication, presenting this theory to us in an English garb, must be hailed as a most acceptable and important addition to medical literature. It is timely, moreover; for, as we all know, these countries have been for some years threatened (however remotely) with a visitation of a cholera epidemic, which, starting in India in the year 1865, will—if it follow the precedent established by previous similar epidemics—sooner or later arrive at our shores. Practical observations, too, are dealt with here, and are abundantly scattered through the work, which concern some of the most urgent and pressing matters belonging to public and private hygiene more generally—matters which have of later years attracted the attention of members of every section of the community—legislators, heads of institutions, heads of families, &c., as well as medical men. Dr. Hime, therefore, in adding this contribution to the growing mass of English literature upon hygienic questions, contemplates it as addressed not exclusively to medical readers, but to the general reading public, of all who interest themselves (as all should do) in matters of hygiene. "For this reason," the translator says, "I thought it more advantageous to bring out a translation of a popular exposition of the leading points of Prof. von Pettenkofer's views on cholera, rather than one of his numerous works on the subject which are more especially intended for medical readers." This much sufficiently expresses the scope and design of the present work.

In an Introduction, clearly and agreeably written, and, above all, not prolix, Dr. Hime introduces the reader to the leading points of Pettenkofer's theory as to the development and propagation of cholera; thus clearing up many points, and elucidating many terms, which the text would otherwise leave somewhat vague, or obscure.

The most essential feature of this theory would appear to consist in the prominence which its author attaches to certain *local* conditions as favouring the development and spread of cholera. Two elements, more notably, which he speaks of as the "ground-air," and the "ground-water," of a locality, hold, according to it, places of such great and paramount significance, as affecting the matter in question, and not only so, but are also so vitally concerned (according to his teachings) in the general sanitary condition of any district, that a word or two in explanation of the terms may not be out of place; especially as (according to Dr. Hime) results of the measurements of the ground-water have not hitherto been published in this country. Excluding the consideration of certain exceptionally circumstanced localities, such as marshes, rocky districts, &c., the condition of the ground on which we walk, live, build our houses, &c., is habitually as follows:—For a certain distance beneath the surface the soil is porous and permeated in its pores by air, or gases of various kinds (noxious or innoxious as the case may be): the amount of this *ground-air*, as it is titled, is such as to form more than one-third of the space which

even the most compact gravel occupies (a fact rather astounding to those who learn it for the first time): this ground-air will diffuse through the soil, will rise into the superjacent atmosphere, or take other various directions of current, in accordance with the ordinary physical laws of pneumatics; and the resultant direction will obviously have much to do, Pettenkofer argues, in determining the health of a district, and the prevalence of cholera, if the cholera germ be present in the soil. The active and uninterrupted communication which exists between the air within and around our houses and that contained in the ground beneath them is a fact the investigation and establishment of which constitute perhaps the greatest of all Pettenkofer's many and laborious contributions to the science of hygiene. It is a fact which shows us in how many other and more subtle ways than those more commonly acknowledged, ashpits, cesspools, &c., may act in contaminating the health of a district. Moreover, this surface soil is everywhere more or less damp, and as we dig downwards in most places we arrive at a stratum which is saturated; this saturated stratum eventually lying upon one which is impervious to water. The water lying in this saturated stratum is termed the *ground-water*. The rise and fall of this ground-water is then, according to Pettenkofer, another important element in determining the hygienic condition of a locality; it carries with it plainly, and, according to him, is the only correct measure of the dampness of the ground above; it regulates the variations in amount of the ground-air; and that it importantly affects the health of a district is the inevitable deduction from these facts, and is the conclusion to be drawn from an examination of a diagram given, which shows the variation of the ground-water in Munich, as observed by Prof. von Pettenkofer during a period of sixteen years, and also the variations in the mortality from typhoid fever there. The constant manner in which the increased mortality accompanies a low state of the ground-water must strike every one.

With these few words of preliminary explanation, Prof. von Pettenkofer's views as to the propagation of cholera are rendered so much more easily intelligible by the light thrown upon them by an illustration given by Dr. Hime, that we quote his own words:—"Let us suppose that just before the outbreak of an epidemic of cholera in a town some very minute seeds have been imported and dropped into the ground, which had been rendered favourable for their growth by the sinking of the ground-water, as noticed in the wells. After remaining for some time in the damp soil, the seeds become ripe, and acquire a poisonous character, and rising with the ground-air float about in the atmosphere. Here they come in contact with the inhabitants, and effect an entry into the bodies of many with the air they breathe, in food or otherwise. A certain number of these take cholera, and within their bodies the seeds undergo a further development, and their numbers become enormously multiplied. These are expelled with the dejections in an immature state, or at all events not in a state to produce epidemic cholera until after they have lain in a suitable soil for some time. A sufficient quantity of full-ripe seed might be transported from one town to another with dirty linen, &c., to infect one or two persons directly, but not enough to produce an epidemic. The persons thus infected would be poisoned by the seeds bodily conveyed from the cholera-district, and to all intents and purposes they might be regarded as having been placed in the same circumstances as those who were living in the infected place, for they would be exposed to the action of the same poison. Now the cases thus occurring through contact with the imported seeds will result in an epidemic if the local and temporal conditions be favourable; otherwise the place will escape in spite of the importation. If now the minute seeds be regarded as analogous to the germs which are the propagators of cholera, the mode in which the disease is spread, according to Prof. von Pettenkofer's views, will be easily understood."

Prof. von Pettenkofer, in alluding to, and clearing up, the varieties and oscillations which professional opinion has undergone on the question of the contagiousness of cholera, points out that a distinction must be made between its *transportability* and its *contagiousness;* and while he appears to be inclined to deny the latter, he acknowledges importation by means of traffic as one of the causes of the spread of an epidemic. Traffic, however, acting through such agents as dirty linen, food, the excreta of patients, &c., as carriers of the poison—is, he takes care to point out, only *one* such cause; the concurrence of certain others being essential. These he treats of under the heads *local disposition, temporal disposition,* and *individual disposition; i.e.,* conditions of the place, time, and individual. That traffic alone is not sufficient to explain the extension of cholera epidemics in countries where they have prevailed, a glance at the numerous so-called cholera-maps is enough to show:—"In every country the localities subject to epidemic cholera are grouped far more according to river and drainage districts, than according to the chief lines of traffic." Several special facts of importance, elicited from modern investigations on the matter, have been established with regard to the agency of local geographic and geologic conditions; such, for example, as the capriciousness of the attack of certain groups of houses, while neighbouring habitations are spared, a so well-recognized phenomenon of cholera epidemics [p. 40]; the correspondence of the local conditions of prevalence of typhoid fever and cholera [p. 38]; the liability to attack of localities situated in hollows, or at the foot of declivities [p. 39]; the immunity of clay soils resting on limestone gravel, through which the ground-water never rises sufficiently high to reach the clay [p. 40]; the fact that in individual houses the epidemic exhausts itself by the end of fourteen days [p. 41]; &c. As to the temporal element, Pettenkofer remarks that "there is hardly another epidemic disease the average course of which exhibits such a regular dependence on the seasons as cholera does in our latitude and climate," summer and autumn being most favourable to it; an observation confirmed by statistical tables of all the attacks which have occurred in Prussia from 1848 to 1860. Individual disposition implies that peculiar idiosyncrasy which in addition to the specific germ (spread by traffic), and the temporal and local disposition, is necessary to render particular individuals liable to cholera during an outbreak; its consideration implies that of the various personal elements which would predispose to an attack, such as neglected diarrhœa, errors of food or drink, exposure, &c.

The bulk of the work before us is—after the exposition of the doctrines thus briefly sketched out—occupied with rules of hygiene having the object of protecting us against cholera by meeting it in some one, more, or all of the directions indicated by the consideration of the causes which (as illustrated above) must combine to its propagation. It is needless to say that the rules laid down are philosophic and practical in the highest degree. They extend, too, beyond the mere limits of special directions against cholera; and form a digest of practical hygiene which cannot fail to convey to those desiring information most useful hints for the preservation of the health of the individual and of the community at any time. To reproduce them here would, of course, transgress the limits of this notice. One observation, of a more general nature, with reference to hygienic precautions adopted in the face of an epidemic, seems to us to strike so at the correct principle that it deserves especial notice:—"From what has been here stated as to local and temporal disposition, it will have been seen that every possible precaution must be taken *before* the outbreak of an epidemic. All ar-

rangements, for example, which relate to the protection of the soil from contamination, or its better drainage, will be perfectly useless if they are only commenced at the time of the outbreak of an epidemic; for it requires much time and care before an impure, impregnated soil can be rendered uncontaminated."

Correspondence.

BERLIN.

FROM OUR OWN CORRESPONDENT.

The Operation of Transfusion—Post Mortem Examination of the Case in which inflammable Gas was discharged from the Stomach during life—New Chairs in the University of Berlin—Erection of a Physiological Laboratory—Professors Traube and Hitzig.

In England, as far as I have heard, the operation of transfusion is not very common. Here, on the contrary, it has lately become very general, which is due in a great measure to the interest excited by the publications of Dr. Hasse, of Nordhausen. Once the symptoms point to the necessity for the artificial supply of fresh blood, the only questions to be determined are, first, must the blood used be taken from an animal belonging to the same species or not; and further, whether the blood injected should be defibrinated or not? This latter question is to some extent settled; for we know that the fibrin is unnecessary for the purpose of improving degenerated blood, and, therefore, that defibrinated or undefibrinated blood is equally efficacious. For it is an established fact that the red blood corpuscles are not in any way injured by the process of defibrination; and we know that the process of oxidation, and through it, probably, all the chief effects that we expect from the blood transfused, is carried on by means of the red corpuscles. Therefore, until it can be shown that defibrinated blood is wanting in some necessary and important constituent, or that defibrination predisposes to some special accident, so long does there seem to me to be no ground for discarding a method which has the great advantage of being so quickly and readily carried out. I would myself, therefore, always use defibrinated blood in preference to undefibrinated; for the former can at all events do no harm, while the advantages of the latter are, to say the least, questionable, and it may under certain circumstances prove eminently injurious, from the coagulation of the fibrin and the formation of thrombi or emboli.

The question as to the practicability of using the blood of an animal belonging to a different species, has lately been to some extent determined by Landois (*Centralblatt*, 1874, No. 27), and Ponfick (*Virchow's Archiv.*, Vol. 62), who have shown that the moment the amount of such blood exceeds a small and fixed quantity, unfavourable symptoms will under all circumstances develop themselves. Ponfick discovered the presence of free hæmoglobin in the blood plasma in these cases, and as a natural consequence in the various organs and their secretions. He draws attention to the anomalous presence of this substance which is never found in normal blood, in the blood plasma, and, considering that the function of the kidneys is to get rid of such a substance, he concludes that the deleterious effects of such transfusions are caused, by the inability of these organs to perform the extra work thus imposed upon them. That the kidneys are hereby seriously inflamed is proved, by finding after death a copious exudation of plasma into the lumina of the uriniferous tubules, which at once causes an insufficient amount of urine to be secreted. Death takes place, just as it does in cases of uræmia, from suppression of urine, the symptoms being in both cases similar. The success which Dr. Hasse, who always transfuses lambs-blood, professes to have obtained is not above question, and the results obtained by other operators, as for instance Birsch-Hirschfeld and Ries, have not come up to the expectations which a perusal of Dr. Hasse's publications is calculated to awaken. In three cases in which I have lately been called upon to perform the operation, I used defibrinated human blood. The ordinary operation was performed twice for excessive anæmia (Pseudo-leukæmia) and once in a case of poisoning with carbonic oxide. In one of the cases of anæmia and in the case of poisoning with carbonic oxide, the operation was quickly followed by the patient's recovery. The other case of anæmia, which occurred in a young man aged 27, proved fatal five hours after the operation, with all the symptoms which usually accompany death after the transfusion of animal blood. None of the patients complained during the operation either of violent stitch or pain in the back, which is a constant symptom when animal blood is used. In all three the temperature rose during the two hours following the operation to 104°—104°·9 Fahr., and then sank quickly to normal. There were no further symptoms. The blood transfused was on each occasion obtained from patients who were suffering from some slight bronchial affection. Immediately after the operation, the patient, who as above mentioned afterwards died, felt quite well, and, like the other two, his pulse was stronger and fuller than it had been previously, and his breathing, which had been somewhat hurried before the operation, became quieter. During the third hour after the operation he began to complain of want of breath and became very restless, tossing himself about in bed, and died quite suddenly without presenting any very special symptoms.

The urine that was found in the bladder was the colour of blood, and contained some cylinder-shaped bodies, which were composed of a finely granular, yellowish-red mass, which contained, however, no red blood corpuscles, but on which the usual hæmoglobin markings were plainly visible.

At the *post mortem*, the heart was found slightly hypertrophied and fatty. The spleen was slightly enlarged; there was extravasation of blood beneath the serous membranes, especially the pericardium and pleura. Neither macroscopically nor microscopically could any alteration be detected in the vessels. The kidneys were large and unusually pale. Under the miscroscope the epithelium of the straight tubes appeared dull. Here and there at the junction of the straight and convoluted tubes, broad cylindrical bodies were found which corresponded exactly with those in the urine. All this agrees accurately with the *post mortem* appearances described by Ponfick and Landois as occurring in cases that proved fatal after the transfusion of animal blood. I have not quite made up my mind as to what were the conditions in this case that led to the fatal termination. It seems, indeed, probable that there was, if I may be allowed to use the expression, a sort of morbid predisposition of the whole circulating system and its contents. From the state of fatty degeneration in which the heart was found, it is plain that there must have been some interference with the nutrition of the vessels, and a considerable change in the constitution of the blood. Now, why should not blood whose chemical and morphological elements have undergone such a change bear the same contrast with healthy blood, as it has been found by experiment that lambs-blood does with dogs-blood? It will be very hard to determine in successful cases what influence the transfusion has had, or if indeed it has had any. But the operation itself is so simple, and its good effect so notorious, that it certainly deserves to be performed oftener than it is. In the case of leukæmia that I transfused success-

fully, the operation had a marked influence on the constitution of the blood. For a drop of blood obtained before the operation by pricking the finger, appeared of a light blood-red colour and watery; while a drop obtained in a similar manner after the operation had a florid red colour, and seemed thicker. Both before and after the operation the red blood corpuscles presented a peculiar pale and glistening appearance, and their number was not perceptibly increased by the operation. I may further remark that the eight cases in the Augusta Hospital, in which Dr. Kuster lately performed transfusion with lambs-blood, all turned out unsuccessful. These eight cases all died, and in none of them was the good effect of the operation perceptible for more than from ten to fourteen days. In one case the operation was probably the immediate cause of an attack of hæmoptysis, and in another it was followed by protracted fever. All the patients complained during the operation of violent pain in the back and great difficulty in breathing. From half an hour to an hour after the operation they were seized with a rigor, followed by a rise in temperature, which was again dissipated in from five to six hours. It is only fair to mention that all these patients were suffering at the time of the operation from some severe surgical injury.

Not long ago I gave you an account of a man who was in the habit of discharging inflammable gas from his stomach.(1) He has since died, and I have had the opportunity of making a *post mortem* examination of his body. Contrary to my expectations I found the stomach but little distended. The pyloric orifice was imbedded in a hard tumour about the size of a walnut, and its calibre reduced to that of a crow-quill. The whole mucous membrane of the stomach was pale and anæmic, and became gradually lost in the substance of the tumour. The serous coat was everywhere thickened, this being most marked in that portion which covered the tumour, when the membrane was nearly 1 mm. thick. The microscopic examination of the tumour showed it to be a fibro-myoma. The glands of the stomach, except in the immediate neighbourhood of the cardiac extremity, had completely disappeared. The whole thickness of the mucous membrane was occupied by innumerable small, round cells, which had completely destroyed the regularly arranged stomachic glands, and only with difficulty could a few widely-scattered, tubo-shaped bodies, be recognized as such. In these miserable representatives of the glands of the stomach, ordinary epithelium could not be recognized, its place being apparently taken up by a finely-granular detritus. The man could, therefore, no longer assimilate his food, and the attempt made for some time before his death to nourish him per rectum, could not, of course, satisfy for any length of time his craving for food.

The nature of the tumour explains quite sufficiently the absence of any of those symptoms, which during life, are usually looked on as pointing to the existence of a malignant growth. The presence of carburetted hydrogen in the eructations is however still just as great a mystery as ever. Kunkel has lately shown that during the pancreatic digestion a gas is evolved, which is composed of carbonic acid gas, hydrogen, and carburetted hydrogen. It is easy to imagine that regurgitation of some of this gas could take place from where it was formed into the stomach. The small size of the pyloric opening militates against this view, as also the fact, that the formation of these gases during pancreatic digestion appears only to take place provided that Bacterien are present, *i.e.*, when free access is given to the air. For Hufner could not demonstrate their presence when the air, and with it all organic germs, were shut out.

I will close this letter with some items of general news. You have probably already heard that strennous efforts have lately been made to increase the staff of teachers at this University, the number of students attending it having decreased during the last term. Thus the physical science department has been strengthened by the appointment of Kirchoff as a professor. Three other new chairs have been created: one for a professor of anatomy and two for special clinical professors, but these have not yet been filled. An immense laboratory is at last being built for the study of physiology and physics, and I have Prof. DuBois' authority for saying that when finished it will surpass all similar institutions. It is to be hoped that the students will respond to these efforts by presenting themselves in increasing numbers. It is, however, believed by many that it is not any want of proper instruction that prevents students from coming up to our University, but rather the great expense of living in Berlin.

To everyones great joy Prof. Traube's health is so far restored that he will be able this summer to resume his clinique. As a set-off to this, we are losing Prof. Hitzig, one of the most talented and enthusiastic of the younger members of the profession in this city, who has been appointed to the Lunatic Asylum at Zurich. He is known to you in England by his investigation on the excitability of the grey matter of the brain, and from his controversy with Dr. Ferrier.

DR. C. A. EWALD,
Charité, Berlin.

(1) IRISH HOSPITAL GAZETTE, Vol. II., p 254.

PARIS.

FROM OUR OWN CORRESPONDENT.

M. Dubrueil on Chronic Affections of the Organs of Locomotion.(1)

WE shall now take up the consideration of one of the most important points in the history of Potts' disease. M. Dubrueil alluded to the lesions of the spinal marrow and its membranes. M. Dubrueil did not wish to enter minutely into the morbid anatomy of these parts, but simply to pass in review those most commonly known. In the first place, in the membranes, the arachnoid and pia mater, traces of meningitis may be found. In the dura mater, the lesions affecting this membrane have been particularly studied by MM. Charcot and Vulpian, also by their pupils. M. Michaux, one of the latter, made some very interesting observations at the Salpetriere, touching the subject under notice. He ascertained that the dura mater is often affected with inflammation (pachymeningitis). This pathological condition is remarkable by its seat. Instead of occupying the visceral side of the membrane, it is situated on its external surface, or that part next the bony case of the spine. This is easily understood, as the inflammation from the neighbouring parts of the bony tissue may extend to the membrane. The following is the appearance, to the naked eye, of a case of pachymeningitis. A thick layer of pus is observed on the external surface of the dura mater, but if we examine the case more minutely, it will be found that this condition is more apparent than real. Instead of pus, we shall find a series of confluent granulations, adherent to one another, and which are sometimes even the seat of small abscesses. In certain cases these granulations have been found ossified. This fact is very important, as the inflammation and thickening may be the starting point of compression of the spinal marrow, and of the nervous filaments which traverse the dura mater thus ulcerated.

In studying the lesions of the spinal cord itself, we shall find that it is frequently enough compressed, but the mechanism of this compression is greatly misunder-

(1) *Continued from page* 142.

stood. It is still supposed by some, that this compression of the spinal cord is due to the incurvation of the vertebral column. But this is an error, as this takes place in such a way, that the spinal cord is not touched by the bony case, and the only circumstance in which such compression may be produced, is by the displacement of a sequestrum or fragment of bone which would act directly on the spinal cord. But the true explanation is to be found in the pachymeningitis, in the abscesses and tubercles which exercise a certain amount of compression on the spine.

What takes place when the spinal cord is compressed? Inflammation, which is more of a chronic type, sets in at first, which micrographically bears the character of myelitis, that is to say, proliferation of the elements of the neuroglia takes place, accompanied with the formation of purulent elements or pus globules, and the granulo-fatty transformation of the nervous elements. If the compression be of ancient date, then we shall find other lesions, those which characterize sclerosis. In this case we shall find the spinal marrow shrunken, and presenting a greyish colour. With the microscope, we shall find considerable hypergenesis of the neuroglia, which gradually invades the neighbouring parts, and ultimately produces atrophy of the nervous elements. This sclerosis is known by certain characters, and follows a particular course, which has been well studied by M. Bouchard. If in proceeding from the point which corresponds with the seat of Potts' disease, we examine what takes place above and below, we shall find that above we have to do with ascending sclerosis, and that the sclerosis has for its seat the posterior columns. It does not occupy the entire substance of these columns, but only that portion designated the column of Goll, which is only to be seen in the cervical region, and in the upper portion of the dorsal region. On the other hand, if we examine the parts below Potts' disease, we shall find that we have to do with anterior and descending sclerosis, that is to say, that which affects the lateral columns of the spinal cord.

Such, then, is the morbid anatomy of Potts' disease. It remains for us to speak of other lesions which are simultaneously observed in the lungs and liver. But these do not belong to the province of the surgeon; suffice it, however, to say, that in persons affected with Potts' disease, we may expect to find other manifestations of tuberculosis, either in the form of cavities in the lungs, or fatty degeneration of the liver.

(To be concluded).

Extracts from Journals.

Poisoning by Chloral.—An interesting case of poisoning by chloral hydrate is reported in the *Centralblatt f. d. Med. Wissenschaften*, of 3rd April, 1875, as follows:—A man who had taken 24 grammes (about 370 grains), of chloral hydrate was found half an hour after in a deep sleep, no more dangerous manifestations of its effects having yet developed themselves. About half an hour later, however, he began to suffer from interruped respiration, the heart remaining normally active. Subsequently the heart's impulse became dangerously feeble, so that the pulse could only be felt in the carotid, while the face became deadly pale. The pupils were greatly contracted, and the temperature sank to 32°·9 (91·22 F). Artificial respiration by means of passive motion and faradisation being followed by no improvement, 0·003 grm. of strychnia was injected subcutaneously. Muscular spasm set in immediately, rapidly followed by trismus, the heart's impulse became again perceptible, the pupils enlarged, and the temperature rose to 33°·3 (91·94 F). Dangerous symptoms manifesting themselves again shortly after, a second injection of 0·002 of strychnia was administered, the effects of which displayed themselves as before; the heart increased in power and the temperature rose to normal. Respiration, however, had to be excited for 8 hours longer by means of the induction current. Thirty-two hours after the intoxication he awoke fresh and free from all effects, having been easily wakened on several occasions from his deep sleep for some time previously. The trismus and tetanic contractions of the muscles of the upper extremity persisted for fourteen hours after the second injection of strychnia. No gastritis followed this enormous dose of chloral, perhaps because it had been taken on a full stomach.

A. E. J. B.

Medical Ophthalmoscopy and Cerebroscopy.—At one of his clinical lectures in the *Hospital des Enfants Malades*, M. Bouchut, in the presence of some professional brethren whom he had invited, submitted the result of his researches on Opthalmoscopy and Encephaloscopy. After depicting the anatomical and physiological relations of the eye with the brain and spinal marrow, for the purpose of rendering comprehensible the influence of cerebro-spinal lesions on the optic nerve, the retina and the choroid, he pointed out the laws governing the formation of intra-ocular lesions depending on affections of the brain, the spinal marrow and of the meninges. These laws are four in number, viz:—First, Every time that the circulation is impeded in the cranium or in the sinuses and meningeal veins by the compression of the ventricles distended with serum or by any other cause, an arrest of the venous circulation occurs which produces swelling of the eye, hyperæmia and œdema of the papilla, varicosity of the veins and sometimes hæmorrhages. Second, When a tumour with encephalitis or when partial encephalitis exists, there follows a descending phlegmasia which induces sclerosis, sclerosis of the optic nerve, and exudations which surround the papilla and at length render it atrophied. Third, If it is the marrow which is affected by either anterior or posterior sclerosis, as this organ on account of its relations with the great sympathetic nerve acts upon the eye, a papillary hypertrophy ensues which in the course of time induces atrophy. This is what occurs in locomotor ataxy. Fourth, In all diatheses and in poisonings, when the whole organism suffers the eye suffers like the rest of the body, and certain forms of neuritis or of choroiditis result.—*La France Médicale.*

D. F. B.

Two New Differential Signs in Dislocation of the Shoulder.—In a Clinical Lecture delivered at the Bellevue Hospital, New York, a portion of which is reported in the *N. Y. Med. Record* of March 27, Prof. Frank Hamilton, M.D., called attention to two special signs of shoulder-joint dislocation (liable to only one exception), which he wished to add to those already given by surgical writers. *First.* While the head of the humerus remains in its socket, if a rule be laid upon the outside of the arm from the shoulder to the elbow, it will not touch the acromion process, but will be distant from it at least half an inch, generally one inch or more. On the other hand, if the bone is removed from the socket, in whatever direction it may be displaced, whether forwards, downwards, or backwards, unless the shoulder is much swollen, the rule, placed in the manner above stated, will touch the acromion process. *Second.* If, standing behind the patient (in case of the right shoulder) the thumb and forefinger of the left hand is made to grasp the top of the shoulder in such a manner as that the interdigital commissure shall rest upon the acromion process, just

outside of the acromio-clavicular articulation: and if then the finger and thumb are dropped perpendicularly, the tip of the finger will (in case the head of the humerus is not dislocated) rest upon the centre of the round upper extremity of the humerus, as it projects in front of the acromion process, while the end of the thumb will rest upon the head of the humerus behind; but the head will be felt indistinctly by the thumb, for the reason that, instead of projecting as it does in front, it actually recedes a little beneath the acromion process. Up to this moment the surgeon may entertain some doubt whether he is actually grasping with his thumb and finger the head of the bone; but if he now moves the elbow of the injured limb forwards, so as to carry the head of the humerus backwards in its socket, he will feel it press strongly upon the thumb, and this will be conclusive. If a dislocation exists, the head of the bone cannot be felt in this situation, and by the thumb thus placed. Prof. Hamilton remarked that both of these differential signs, in their application to shoulder-joint injuries, were liable to one exception. The phenomena would be the same, so far as these two signs are concerned, whether there was a dislocation of the head of the humerus, or a fracture with displacement of the neck of the scapula. The latter accident must, therefore, be first excluded by a careful application of the rules of diagnosis given in our treatises upon surgery; but that upon which one can most safely rely is the relative infrequency of the two accidents. It is doubtful, whether a long and active surgical practice will ever furnish an example of fracture of the neck of the scapula, while a great many cases of dislocation of the shoulder will be met with.

On Chloroform as an Oxytocic.—Schröder in his work on Midwifery (4th Ed., 1874, p. 453), when treating of the causes of uterine inertia, says, that if the pain caused by the uterine contractions be very excessive, it may lead to their total arrest. In such cases he recommends the administration of opium or chloral internally, or the inhalation of chloroform, which by lessening the pain felt, allows the uterus, as it were, to work as hard as it can. M. Trippier, in the *Gazette Obstétricale*, Nov. 5, 1874, p. 322, gives a case of ordinary labour in which he thought it advisable to give chloroform, not as an anæsthetic, but as an oxytocic. His explanation of its action as an oxytocic is, however, very different from the above, and is as follows:—"It is a well known fact that section of the spinal cord increases the motor and sensitive powers of the part below the point of division, as is shown by the increased intensity of all reflex phenomena in such parts. It will be allowed that the effect will be the same, no matter what means are employed to remove a portion of the cord from beyond the influence of the brain, or to produce what Marshal Hall has designated cerebral paralysis. Now, chloroform acts much quicker on the brain and sensitive nerves than on the nerves of reflex motion and the ganglionic system, and thus produces a temporary state of cerebral paralysis. It is on account of this property that I have used it to increase uterine action, which is a reflex phenomenon, when the pains are insufficient for the expulsion of the child. In a woman, therefore, who is not already exhausted, if the uterine contractions become ineffectual or stop altogether, the administration of chloroform will renew them, regulate them, and increase their efficacy. Chloroform is, therefore, indicated in all cases where we suspect that the labour is arrested through an excess of cerebral action leading to spinal inertia." A. V. M.

In Severe Asthma.—Inject five grains of chloral subcutaneously, in twenty minims of water.—*Philadelphia Med. Times.*

Reports of Societies.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, April 24th, 1875.

ROBERT McDONNELL, M.D., F.R.S.,
President, in the Chair.

Mitral Stenosis—Pericarditis.

Dr. MacSwiney exhibited the heart, liver, and upper portion of the digestive tract of a woman, aged 30, who had been admitted under his care in the beginning of the month with acute rheumatic arthritis and pericarditis. Five years previously she had recovered from an attack of rheumatic fever, in which her heart was affected, and during her fatal illness, Dr. MacSwiney detected a bruit at the apex, which he considered to be post-diastolic. She was in a state of extreme debility; complained of pain in the hepatic region; her appetite failed, and there was effusion of serum into the cavities of the peritoneum, pleura, and pericardium. The left auriculo-ventricular orifice was extremely contracted. The opening resembled a slit, and did not admit the tip of a finger. The mucous membrane of the œsophagus, stomach, and duodenum was intensely congested, and of a deep scarlet colour. The œsophagus was contracted, its walls thinned, and almost in a gangrenous state. Dr. MacSwiney could not ascribe any reason for this condition, unless it was similar to that sometimes observed in cases of prolonged abstinence; and in this instance food had not been taken for some days before death.

Calcareous Transformation of a Uterine Fibroid.

Dr. Atthill presented a very perfect example of the above, taken from the body of a woman, æt. 60, who had died of pneumonia. There was no clinical history relating to any uterine disease. The tumour was altogether sub-peritoneal, and was situated on the anterior surface of the normal uterus. On its posterior surface there was a small true fibroid, which had a small calcareous patch in it. The entire of the large tumour was converted into one mass of calcareous matter. The liver also contained a cyst, a portion of the wall of which had undergone calcareous change.

Pyelitis—Cystitis.

Dr. Barton presented the urinary tract of a printer, aged 47, which had an instructive bearing on the study of urinary diseases. For nearly a year the man was compelled to pass water every hour. He had only passed blood once. He came under Dr. Barton's care on the 16th March. The sp. gr. of the urine was then 1006; it was highly albuminous, and deposited blood, ropy mucus and pus. There was no stricture, no stone in the bladder, or enlarged prostate; consequently it was difficult to determine the cause of these symptoms. The patient got worse; he could not hold water longer than a quarter of an hour at a time, and died three weeks after admission. *Post mortem*:—Both kidneys were diseased, the right especially was the seat of numerous small strumous abscesses and cysts. The ureters were dilated and their coats thickened with effused lymph. The opening of the right ureter into the bladder was completely closed. The bladder was greatly contracted; its muscular coat extremely hypertrophied, and its mucous coat sacculated. Behind the bladder was a large chronic abscess which had pressed upon that viscus, and so caused the frequency of micturition. It was a question whether the inflammation caused by the abscess had extended from the bladder to the ureters and kidneys, or whether the disease had originated in the kidneys.

IRISH HOSPITAL GAZETTE.

VOL. III.] DUBLIN, JUNE 1, 1875. [No. 11.

EDITORIAL ANNOUNCEMENT.

THE Editor of the IRISH HOSPITAL GAZETTE having made arrangements to amalgamate this Journal with the well-known and long-established *Dublin Journal of Medical Science*, begs to inform Subscribers that the publication of the IRISH HOSPITAL GAZETTE as a distinct Journal will cease with its next issue.

In thus uniting with the *Dublin Journal of Medical Science*, the Editor of the IRISH HOSPITAL GAZETTE has the pleasure to announce that he brings with him to it, promises of support from those who have so materially assisted him in the establishment of this Journal. To these Gentlemen the Editor is mainly indebted for the favourable reputation which, it is believed, the IRISH HOSPITAL GAZETTE has acquired in the comparatively short period of two and a-half years; during which time also, he is pleased to think, it has been the means of bringing before the Profession several valuable communications.

In addition to the Half Yearly Reports already appearing in the *Dublin Journal of Medical Science*, supplementary reports in other special subjects, by some of the able writers of the "Reports in the Progress of the Medical Sciences" which have formed so highly appreciated a feature in the GAZETTE, will be published in the amalgamated Journal.

The amalgamation will come into effect on the 1st of July next, on which date the sixtieth Volume of the *Dublin Journal of Medical Science* commences. For further particulars as to the programme intended to be pursued in it, we would refer to the announcement published in the number of the *Journal* of this day.

We earnestly hope that the contributors and subscribers to the IRISH HOSPITAL GAZETTE—whom we take this opportunity of sincerely thanking for their warm support in the past—will continue to assist us in this combined effort to produce a high class representative Journal, worthy of the Irish School of Medicine and Surgery.

GEORGE F. DUFFEY, M.D.

Hospital Reports.

NORTH INFIRMARY, CORK.

CASE OF NECROSIS OF THE TIBIA, FOLLOWED BY PYÆMIA—DEATH.

AN OBJECTION TO THE USE OF ESMARCH'S BANDAGE IN NECROSIS.

Under the care of DR. SHINKWIN, Surgeon to the Infirmary.

Reported by MR. MARTIN HOWARD, *Resident Pupil.*

DAVID K——, æt. 17, agricultural labourer, was admitted into the North Infirmary on Tuesday, 3rd November, 1874. He stated that about twelve years ago his right leg suddenly swelled up, assuming a glossy, purplish red colour, that an abscess next formed in the middle of the leg, and subsequently small portions of bone escaped through the opening formed by the bursting of the abscess. Under medical treatment, however, he regained the use of his limb, after being confined to bed six weeks, and was enabled to discharge his ordinary avocations in life without the smallest inconvenience. Six weeks from the date of admission, the leg swelled and grew red as before, several little apertures gradually appearing on the anterior part of the limb. The leg looked very much enlarged and irregular in shape, the skin in front being of a bright, shining character, at once suggestive of the disease. A probe passed into any of the apertures gave the peculiar rough feel diagnostic of diseased bone, and on introducing the probes into the two different and larger apertures in about the middle two-fourths of the tibia, the sequestrum could be slightly moved to and fro.

There was an abundant fœtid discharge from the leg, and the patient complained of a sense of weight about the limb, with throbbing pain and scalding heat. His general health was not at all good. On Monday, 7th December, the patient was put under chloroform, and Esmarch's bandage was applied. An incision was then made between the two larger apertures, down to the case of bone enveloping the old bone, the periosteum denuded with a raspatory, the new bone trephined, and the loose sequestrum extracted with a bone forceps. Simple dressings were next applied, the patient conveyed to bed, and the limb kept raised on pillows. A haustus opii (30 mins.) was given at once.

The patient progressed well up to the 12th December, when it was reported that on this morning at 9 A.M. he was seized with a prolonged fit of shivering, followed by copious perspiration. Further examination revealed considerable inflammation of the veins along the necrosed limb, together with enlargement of the glands in the right groin. Pulse 130, soft and weak; resp. 26; temp. 105°·6; great thirst; skin hot and dry; feels heavy and restless; discharge from limb fœtid.

He was ordered quinine and iron in large doses, beef-tea *ad lib.*, and brandy and egg mixture. The limb was also enveloped in a large linseed poultice.

13*th.*—Second day—Morning.—Had a restless night; rigor three times since yesterday—the last at 8 A.M.; skin dry now, but perspiration following each rigor, leaving the patient much prostrated; thirst excessive; tongue parched and white; pulse 104; resp. 24; temp. 104°·8; passed no water during the past twenty-four hours.

A catheter was introduced, and a pint and a-half of water drawn off, which was found to be acid, to contain some albumen and chlorides, to have a sp. gr. of 1015, and to be high coloured and sooty in character.

Treatment ordered to be continued.

13*th.*—Evening.—Two rigors during the day; pulse 112; temp. 105°; resp. 30; vomiting set in at 2.30 P.M.; complains of pain in the epigastric region.

Ordered: Mist. cit. potass., and a mustard plaster to the stomach.

14*th.*—Third day—Morning.—Slept a few hours, vomiting having ceased about midnight; pulse 114; temp. 101°·4; resp. 30; rigor twice since last report, the latest at 8 A.M.; complains of a stabbing pain in left mammary region; has a slight hacking cough, which increases pain; local fremitus increased at left side; percussion deficient in resonance at same side, and respiration weak. Continue medicine.

14*th.*—Evening.—One rigor; pulse 104; temp. 103°·8; resp. 30; skin hot and dry; cough troublesome; sputa ropy.

15*th.*—Fourth day—Morning.—Fair night; three rigors; pulse 108; temp. 101°·6; resp. 28; elbow joint at right side swollen, tender on pressure and giving the feel of fluid fluctuation.

Medicine continued; elbow joint ordered to be wrapt in wadding, saturated with spt. camph.

15*th.*—Evening.—no rigor; pulse 104; temp. 101°; resp. 26; skin dry and sallow.

16*th.*—Fifth day—Morning.—Restless night; three rigors; pulse 112; temp. 104°; great pain in elbow joint; excessive thirst, decubitus dorsal; much prostration. Continue medicine.

16*th.*—Evening.—Pulse 120; temp. 102°·8; resp. 30; no rigor; looks anxious; tongue dry.

17*th.*—Sixth day—Morning.—Pulse 112; resp. 28; temp. 103°; two rigors; complains of much cough and pain in the chest; dulness more marked. Continue medicine.

17*th.*—Evening.—Pulse 110; temp. 105$_0$; resp. 26; no rigor; cough troublesome; sputa white.

18*th.*—Seventh day—Morning.—Restless night; pulse 114; temp. 104°·8; resp. 26; cough constant; sputa ropy, rusty and viscid, and abounding in chlorides; lateral dulness revealed on right side by percussion; liquid crepitation heard at left side, at the end of each inspiratory movement; respiration at right side puerile, nearly absent at left; excessive thirst; urine scanty; sp. gr. 10·15; albuminous, deficient in chlorides; countenance flushed; extreme prostration; herpes on face and lips. Continue medicine.

18*th.*—Evening.—Pulse 120; temp. 105°; resp. 30; cough troublesome; great weakness.

19*th.*—Eighth day—Morning.—No rigor; pulse 112; temp. 102°; crepitation very loud; breathing rapid and laborious; pustular eruption observed in several parts of the body; expectoration rusty; pectoriloquy at left side. Continue medicine.

19*th.*—Evening.—Pulse 130; temp. 103°; resp. 36; skin dry; countenance sallow.

20*th.*—Ninth day—Morning.—Very restless night; pulse 140; temp. 106°·8; resp. 36; no rigors; smell of new mown hay from perspiration; cheeks flushed. Continue medicine.

20*th.*—Evening.—Pulse 110; temp. 102°·4.

21*st.*—Tenth day—Morning.—Pulse 140; temp. 104°·4; tinnitus aurium; complete dulness and bronchophony at left side; dulness most marked over lower lobe of right side; breathing diaphragmatic; respiration blowing at right side, inaudible at left; bubbling râles at left side; slight delirium; great weakness. Continue medicine.

21*st.*—Evening.—Pulse 140; temp. 103°·6.

22*nd.*—Eleventh day—Morning.—Radial pulse not perceptible; temp. 105°·8; copious perspiration; low muttering delirium. Died at 4 P.M.

AUTOPSY.—When the intercostal spaces were divided in the usual way, a greenish puriform fluid escaped from the cavity of the thorax, the flow continuing until about two gallons had come away. Lobular pneumonia was the condition of both lungs; the right being in the red hepatized state, the left in the suppurative or sloughing. There was effusion into the pleural cavity; the heart was healthy, but a clot was found in the pulmonary artery; the liver was highly congested, and filled with small abscesses, none of which had burst.

At this point, the examination was unfortunately interrupted by the arrival of the patient's friends, and all further proceedings had to be stayed.

REMARKS.—In these days of progress, when

surgical science has made such rapid and steady strides to perfection, and operative practice has been to a certain extent revolutionized by modern discoveries, the history of the above case presents for consideration a matter of no small interest and importance.

What caused the pyæmia? Supposing the operation for necrosis to have been performed according to the old custom, and that pyæmia ensued, there would be little difficulty in answering the question; but the fact of Esmarch's bandage having been employed, gives rise to the suspicion that the disease was produced by the bandage driving the septic matter secreted by the superficial sores into the current of the circulation. This aspect of the case was particularly dwelt on by Dr. Shinkwin in his clinical observations, and the question was argued at a meeting of the Cork Medical Society, and to the kindness of Dr. Ringrose Atkins, Hon. Sec., I am indebted for a brief summary of the discussion that took place.

Dr. Popham said that as Esmarch's method was only now on its trial, we should not too hastily, from such a case as this, assume that it was the cause of the fatal symptoms, as from the broken health and delicate constitution of the boy, they might have supervened under any mode, or under any kind of operation.

Dr. Finn said that he had seen the patient, and a more unhealthy-looking subject had rarely come under observation, and he was of opinion that from the length of time after the operation, and from the cachectic state of the patient, the pyæmia could not be attributed to the use of the elastic bandage.

The President (Dr. E. R. Townsend) concurred with Dr. Finn, and thought that if the blood-poisoning was the result of morbid materials being driven into the circulation from the superficial sores, it would have occurred much more rapidly.

Dr. Atkins (Sec.) said that the pyæmic symptoms might have been due to absorption by the cancellous tissue of the bone of the septic products of the inflammation, consequent on the operation.

Dr. Cremen was also of opinion that the fatal symptoms were not due to the use of Esmarch's bandage; and in regard to the operation itself, said that from his experience at the Workhouse Hospital, it was better allow nature to bring about a cure in cases of necrosis than to hurry matters by operation.

Dr. Shinkwin said he was glad to hear the opinions expressed on the subject, as the operation for necrosis from its duration, the quantity of blood lost by oozing, and the difficulty of seeing the parts when covered with blood, was one in which the bloodless method would prove most useful to the surgeon.

From this discussion it is plain that the members of the Society were unanimous in not attributing the pyæmia in the case before them to the use of Esmarch's bandage; but it is equally plain that none of them would go so far as to deny the possibility of the bandage producing pyæmia in cases of a similar character. In fact, as observed in a number of the IRISH HOSPITAL GAZETTE(1), "One of the objections that was offered to the use of Esmarch's method of producing surgical anæmia on its first introduction into practice, was, the liability there was of pressing purulent matter into the circulation, should any depôt of such exist in diseased parts subjected to operation according to this method."

MacCormac, who was the first, we believe, in this country to operate by the bloodless method—and this, too, for necrosis of the tibia—says,(2) that in no operation is it more strikingly useful than in those for necrosis, and mentions the case of a double operation performed by Esmarch, and his assistant, Dr. Petersen, simultaneously.(3) He seems, however, to have foreseen the very objection that was subsequently raised to the employment of the bandage, for he states, that in cases where there are diffuse abscesses in the limb, or any putrid or gangrenous deposits, the use of the elastic bandage would certainly not be free from the risk of pressing the septic material into the circulation.

Mr. J. V. Lauderdale, Assist. Surg., U.S.A., also enters into a discussion upon the use of Esmarch's bandage in the operation for necrosis,(4) admitting the possibility of blood-poisoning, and suggesting, by way of prevention, a kind of circular elastic compress, particulars of which will be found in the page of the GAZETTE already referred to.

Finally, the case in question is certainly a remarkable one in the history of bloodless surgery, coinciding so accurately, as it does, in the objection that has been raised to the employment of Esmarch's method in the operation for necrosis, and until experience and experiment have settled the matter beyond the possibility of a doubt, surgeons ought decidedly hesitate to expose their patient to the consequences of an almost invariably fatal disease, from the desire to keep pace with the progress of science.

FACIAL NEURALGIA.—Dr. Hamilton has lately tried in these cases, with the most satisfactory results, the local application of the ether-spray by the atomizer. Freezing of the skin just anteriorly to the ear will, he says, cut short a violent attack of facial neuralgia in a few moments.—*Philadelphia Medical Times*, Feb. 6th.

(1) Vol. II., No. 20, p. 321.

(2) *Vide* Paper on "Bloodless Surgery."

(3) This was a case of necrosis of both tibiæ, with suppuration of the knee-joint on one side. Esmarch first removed many pieces of dead bone from the tibia, and, then, performed resection of the knee-joint; his assistant being engaged at the same time operating for necrosis in the other limb.

(4) *Vide N. Y. Med. Record*, July 15th, 1874.

WESTON-SUPER-MARE HOSPITAL.

LARGE ABDOMINAL MALIGNANT GROWTH—AUTOPSY—REMARKS.

By ROBT. SAMUELS ARCHER, M.B., M.Ch., Univ. Dubl., House Surgeon to the Hospital.

HENRY M——, æt. 35, admitted to the Weston-Super-Mare Hospital on Dec. 19th, 1874, a trunkmaker by trade. During the autumn of 1874 he was exposed to a great deal of fatigue, having walked from Leeds to Manchester and again from Birmingham to Bristol. During these walking expeditions, he was very scantily provided with food, living principally on blackberries and apples, which he picked up in the orchards alongside the road, and sleeping out in the cold, damp, autumnal air, under hedges, behind hayricks, &c. Besides these bodily privations and hardships he met with mental troubles as regards his domestic affairs, his wife having broken up his establishment (a small public-house), and sold all his effects, thus forcing him out on the world.

State on Admission.—The patient was very emaciated, his face was haggard, care-worn, and somewhat dusky in hue; extreme weakness. He complained of pain in left groin, and in the lumbar region of that side; in the latter situation a slight bulging was discovered, and there was decided dulness on percussion. The lungs were quite healthy and the cardial sounds normal. There was slight deviation of the line of spinous processes in the lower dorsal and upper lumbar regions. I could elicit no history of rigors.

The symptoms and physical signs continued much the same till Dec. 29th, ten days after admission, when a hard, well-defined prominence made its appearence in the left hypochondrium. This prominence gave forth a very dull percussion note, extending in every direction about five inches, and communicated the idea of being very resistent; there was not the faintest approach to fluctuation. About this time it was also observed that the percussion note over the position of the lower third of the left lung was markedly dull. After weighing the various symptoms, and a very careful examination being instituted, I came to the conclusion that this dulness was depending on some extra-thoracic tumour, encroaching from the abdomen on the cavity of the chest. He now began to complain of great pain in the upper abdominal regions and "round the back;" the pain in the groin was much mitigated; he could now tolerate firm pressure in that region. The pain in the abdomen was greatly relieved by opium. Troublesome hiccup supervened which harassed him very much.

Jan. 4, 1875.—Morning pulse 100; temp. 99° F.; face rather flushed. 11.20 P.M.—Complaining much of pain in the left groin; says "it is like a knife going through him."

7th.—Symptoms remain much the same, with exception that the singultus is not so troublesome; slight œdema in lower and posterior parts of lungs, especially the left.

8th.—Some difficulty in voiding his urine.

9th.—Talking a lot of nonsense; says "he has had a grand spree," and other bosh. The tumour in the left hypochondrium can now be distinctly traced with eye as being prolonged diagonally downwards towards the left lumbar region, forming a well-defined ridge, limited on the right side by the mesial line and extending upwards about five inches from the umbilicus, thus forming, as it were, a diagonal girdle of dulness round the left half of the trunk from the mesial line in front quite round to the spine behind.

26th.—The hypochondriac tumour has increased considerably in size, is much more prominent, very hard, resistent, producing an absolutely dull woodeny percussion note, and somewhat nodulated. Complaining a good deal of pain across the "pit of his stomach;" is very restless, noisy, and groaning. Inclined to sickness, but does not actually reject his food.

27th.—Coarse inspiratory râles audible in lower part of left lung posteriorly.

31st.—The tumour feels slightly softer; an obscure gurgling can be detected, and a sensation communicated to the fingers as if some flat smooth substance were slipping over it in front, just below its most prominent point; this substance was considered to be some portion of the intestinal canal—probably, the transverse colon—lying across the mass. Has not been suffering so much from the paroxysms of pain and "tightness" across the upper part of the bowels for the last day or so, but in other respects his condition is unaltered.

Feb. 6th.—Weaker to-day than he has been since his admission; does not take his food nearly so well as heretofore; tumour increased in size, and now bulges out the lower ribs on the left side; a slip seems also to be growing from it into the right hypochondrium.

7th.—Much worse; pulse 100°, very feeble; lies in a semicomatose condition; large loose gurgling râles audible over all parts of the chest; tracheal râles; sinking.

9th.—9.40 A.M.—Had a very restless night; continually moaning; comatose; skin clammy; moribund; died at 2.45 P.M.

POST MORTEM EXAMINATION.—Dead about twenty-four hours; cadaveric rigidity slight; emaciation extreme; left hypochondrium occupied by a prominent swelling, by which the lower ribs on that side are bulged out; a tumour about the size of a small orange, irregular and nodulated, at root of neck on left side.

Thorax.—Lungs contained some slightly coloured fluid, which flowed out on section, but in

other respects were healthy. Left lung tied down by weak adhesions; a small quantity of recent lymph poured out at the base, and on the diaphragmatic aspect of the right lung; there was a small quantity of serous fluid in the left pleural sac; on the left side the diaphragm was pushed up to a considerable extent posteriorly by the abdominal tumour, which thus encroached on the thoracic cavity; the heart was found to be quite healthy, though small.

Abdominal and Pelvic Cavities.—On exposing the cavity of the abdomen, the great omentum, quite devoid of fat, was observed to extend down in front of the intestines like an apron. The left side of the epigastrium, the left hypochondriac and left lumbar regions, were filled with a large nodulated mass, over which the peritoneum was stretched. This mass extended down the lumbar region deeply into the iliac fossa and left side of the pelvis; it presented, when in situ, and viewed in front, very much the appearance of a gigantic heart, the apex, as it were, occupying the depths of the pelvis on the left side, and the base situated in the epigastric and left hypochondriac regions. The stomach lay quite free above and in front of the upper part of the tumour, not having contracted any abnormal adhesions. The greater portion of the small intestines was contained in the lower right side of the abdomen and pelvis. The termination of the duodenum and the commencement of the jejunum, to the extent of about six inches, were firmly attached in a crescentic form to the lower aspect of the growth on its right side. The transverse colon was tied down by firm adhesions in front and a little above its middle, for the distance of about six inches, till it joined the descending colon at an acute angle; about eight inches of the latter part of the large gut had also formed close connections with the surface of the tumour, along the anterior aspect of its left margin. The mass, having entirely swallowed up the pancreas and left kidney, and extending in the directions indicated above, was firmly attached to the prevertebral fascia and to the fascial lining of the lumbar region, the iliac fossa, and sides of the pelvic cavity. The right ureter was seen running in its normal course along the right inferior margin of the tumour, to which it was attached by loose adhesions, and formed its limiting boundary in that direction. The left ureter, like the corresponding kidney, was buried in the mass, all except an inch or so of its termination. The growth had formed adhesions with the spigelian lobe of the liver and with the spleen; the latter organ was in no way infiltrated with malignant growth, although if the patient had had strength to hold out long enough, doubtless in time it would have become so. Almost the entire of the abdominal aorta, its bifurcation, the first part of the right and the whole of the left common iliac vessels, as well as the greater portion of the vana cava inferior, were imbedded in the mass. The liver was thickly studded with nodules of medullary carcinoma, varying in size from a pea to a large cherry. The weight of the tumour was 7½lbs. Its measurements were—length, 13 inches; width (about middle), 8¼ inches; circumference of long diameter, 23 inches; of short, 19½ inches. Over its entire free surface were scattered nodules, smooth and prominent, varying in size from a pea to a small orange. On section it was found to be composed of bands of fibrous tissue, enclosing spaces filled in some parts with cheese-like friable matter, whilst other portions were occupied by very much softened and diffluent cerebriform substance of the consistence of thick cream. The latter condition was most apparent in the lower left and central parts. Towards the deep attachments of the mass, the soft almost semi-fluid matter acquired a dirty reddish-brown appearance; and where it had been separated from its fascial connexions it presented a ragged, rough, boggy surface, exuding a dirty brown thick fluid. The change from the cheese-like matter, occupying the upper and anterior parts of the mass to the softened brain-like substance in the lower and posterior portions, was very gradual. As the latter parts were reached the fibrous texture also became less evident. Under the microscope it presented the usual characteristics of medullary carcinoma.

Remarks.—On seeing this case in the first instance, I was led, from the symptoms which existed, and from the history of fatigue and hardships, to diagnose it as one of psoas, lumbar, or some other form of deep seated abscess, making its way downward towards Poupart's ligament. Another fact which in some degree strengthened this faulty opinion hastily arrived at by me, was the existence of "some *slight* deviation of the line of spinous processes," which I thought might depend on spinal disease, and that possibly the supposed abscess was the consequence of such a lesion. I must confess that (ten days after the patient's admission) when a tumour made its appearance in the epigastrium and left hypochondrium, having none of the well-known characteristics of a collection of pus, being hard, nodulated, and non-fluctuating, and above all making its way upwards instead of downwards, in which direction I had made up my mind it was going to point, I was rather surprised, and was forced to change my diagnosis of an abscess to that of a malignant growth, making its way rapidly upwards from the depths of the pelvis. It appears to me that this mass took its origin in some of the deep seated pelvic glands, extending from thence to the adjacent lumbar glands, and gradually in its upward growth and proliferation infiltrated the lumbar and perinephritic connective tissue with its morbid products, till

at length it attacked the left kidney itself, which it entirely disorganized and destroyed—not a trace of its glandular substance being visible—the pancreas also succumbing to a like fate. It is a remarkable fact, and one well worthy of notice, that, considering the manner in which the great abdominal vessels were embraced by the mass, there was no loss of circulatory equilibrium, as evidenced by the absence of the faintest approach to anasarca or ascites. Bearing in mind the total destruction of the left kidney, I think it remarkable that the remaining gland had not taken on compensative hypertrophy, the only explanation of this fact being, that the rapidity of the tumour's growth was so great, that there was not time afforded for such a change to take place, which doubtless would have occurred had the patient lived long enough. I regret the urine had not been examined microscopically in the early stages of the disease, as very valuable information might have been obtained with regard to the nature of the growth, from the discovery of so called "cancer cells" in the secretion of a gland undergoing so distinctive a metamorphosis. The question as to whether the bodily fatigues and mental distress suffered by the patient acted in any way as a predisposing proximate cause of the occurrence of the tumour, will occur to the clinical observer. For my part I am inclined to think that these circumstances probably played some part in eliciting the peculiar constitutional tendency to morbid growths by setting up deep-seated glandular irritation, which went on to cellular proliferation and the production of a highly malignant form of growth, which owing to innate—I may say congenital—predisposition, would sooner or later have manifested itself, but possibly not so soon, or with such extreme rapidity under more favourable conditions.

Original Lectures.

THE WAR OF THE DOCTORS, SURGEONS, AND BARBERS OF PARIS IN THE SEVENTEENTH CENTURY.(1)

By the Rev. J. W. BARLOW, F.T.C.D.,
Professor of Modern History in the University of Dublin.

THE question whether the human race has been developed, through the gorilla and other animals, from funguses, is still open to discussion;—at least we cannot as yet affirm the proposition as an article of popular belief. But another, somewhat analogous, theory, concerning the nature of Surgeons, is very generally believed to be true, and yet is almost certainly erroneous. I mean the theory that Surgeons have been slowly developed out of barbers. It is easy to show that, so far from this being the case, the Barber-Surgeon really dates from a comparatively recent period. I purpose to-day giving a sketch of the protracted and most acrimonious warfare which was carried on in Paris between the three corporations of doctors, surgeons, and barbers—a war which, originating in the time of mediæval darkness, reached its culminating point in the days of Moliere; and which, notwithstanding the crushing blow to the surgeons by the famous Decree of 1660, continued to smoulder till the Revolution restored peace, by the simple process of at once crushing all the three corporations with every other institution of ancient France. I may add that this history is one possessing peculiar features of interest for the admirers of the *a priori* method in history; we shall find in it repeated instances of the occurrence of events which might have been confidently predicted by any one who was acquainted with the ordinary laws of human nature, and the circumstances in which the different parties were placed.

As the mediæval and modern distinction between Medicine and Surgery had no place in the writings of the ancient authorities,(1) the question arises—How did it come to pass that the art of healing came to be split into these two distinct, and, in former times, mutually-abhorring-each-other branches? We can easily assign one cause for this by simply remembering the ecclesiastical origin of mediæval medicine, which, as we have seen already, was in the dark ages so universally recognized as a growth of the cloister, that the obligation to celibacy on its practitioners survived for many years the decrees of sundry councils which pronounced the incompatibility of the practice of medicine with the ecclesiastical status. This obligation was not, in fact, removed before the year 1452, when a legate (Cardinal d'Estouteville) sent by Nicholas V. to re-organize the University of Paris, abolished the restriction, affirming that "the celibacy of doctors was an impious and unreasonable affair."

Now when we bear in mind the venerable ecclesiastical adage, "*ecclesia abhorret a sanguine*," we have at once *one* obvious reason why the use of the surgeon's knife should have been interdicted to the priest-physician. To shed blood, even for the benefit of the patient, was unseemly

(1) [This lecture formed one of a series delivered in Trinity College, last Michaelmas Term, on the History of the Medical Profession in France. These lectures, though open to the public, were written only for the undergraduate Students in Arts, and the lecturer never contemplated the publication of one of them in a Medical Journal. The learned reader will therefore please to confine his natural indignation strictly to the Editor.

The principal materials for this lecture will be found in Dr. Maurice Raynaud's interesting work—"*Les Medecins au temps de Moliere*."—J. W. B.]

(1) Mr. Grote (History of Greece, part II. chap. XXXIV.) calls attention to a remarkable Medical oath, published in the collection of Hippocratic treatises, which recognizes in the plainest manner the distinction between the physician and the operator. This, however, cannot counterbalance the fact that these treatises represent the physician ἰατρὸς as performing all sorts of operations, even such as require violent and mechanical dealing. He would, therefore, assign the oath to a later date. I may also refer to a remarkable passage in which Xenophon, as it appears to me, explicitly confounds the physician and surgeon.—*Anabasis*, V. VIII., 18.

in the ecclesiastical dignitary. But, just as the Fire-worshipping Parsee, who would not dare to blow out a candle himself, has no objection to order his Mahometan servant to do it for him, so the priest had no hesitation in prescribing and directing the operation which he judged to be necessary. Hence the unavoidable employment of a class of men to perform, for hire, such operations, and to discharge any other functions which might be regarded as unworthy of the clerical character.

But another cause existed which was perhaps equally efficacious in splitting the profession into two branches. I mentioned in my last lecture that the Medical faculty in Paris succeeded, at an early period, in obtaining the usual privilege of the noblesse as to exemption from the public burdens; we cannot wonder, then, if they were tenacious of the usages of the class in which they would fain see themselves enrolled. Now in the old feudal system it was held as a sort of axiom, requiring no proof, that the exercise of any manual art was degrading to a gentleman. God Almighty bestowed on the gentry their hands for the exclusive purpose of destroying their fellow-creatures with the help of a lance or a sword. Any other use of them was only fit for a snob. No matter how much skill was required in the practice of an art, the mere fact that a man made use of his hands (save as aforesaid), was sufficient to exclude him from associating on terms of equality with anyone above the class of roturiers. In vain did the chirurgeons represent that it was in no way, *per se*, more disreputable for a man to make use of his hands than to make use of his eyes and ears, both of which were employed by the doctors in their diagnoses. All such remonstrances were received with silent contempt; and the University of Paris, when associating the Medical faculty (1267-1281) sternly refused to have any intercourse with the low mechanics, the mere manual labourers, who had the effrontery to aspire to Academic privileges.

This exclusion from the University does not appear to have produced any disastrous effects on the surgeons. They resolved to set up a college of their own. This institution, commonly called the College of "St. Come et St. Damien," is referred by the surgeons themselves to the reign of Louis IX; but this date has been regarded by many of the doctors as a mere invention, devised for the purpose of sheltering an upstart corporation under the prestige of the sainted king. The point is one of merely antiquarian interest, and it is likely enough that the so-called statutes of St. Louis are really of later date; but this much is certain, that numerous edicts and letters-patent of the kings of France, dating from the middle of the 14th century, are still extant, and afford unmistakable evidence of the existence of this corporation. There is even of Philip the Fair (1285-1316) one very curious ordinance which gives a strange picture of the state of the surgical profession in Paris and the neighbourhood—it urges the necessity of reform because chirurgery was practised "in villâ et vice-comitatu nostro Parisiensi," by a most disreputable class of individuals—"alii murtrarii, alii latrones, nonnulli monetarum falsatores, aliqui deceptores, alquemistæ et usurarii." Such being the surgeons of the day, the decree proceeds to enact—"Sunto chirurgi communitas, confraternitas, jurati—habento *licentiam* operandi." This word *licentia* occurring here, subsequently became of great importance, the surgeons maintaining that it conferred on them the right of granting the "Licence," which, as we have seen already, was by far the most important of the Medical degrees.

About the middle of the 15th century the immemorial, but smouldering, hostility of the doctors and surgeons broke out into open war. Quesnay, in his History of the Origin and Progress of Surgery in France, avers that "while medicine was united to the Church the physicians never troubled surgery. But ever since Cardinal d'Estouteville gave them wives instead of benefices, their persecution of the surgeons has been incessant." It is not easy to see the connection of the two events, or to assign a satisfactory reason why a doctor, because he had got a wife, should think it necessary to fall upon the surgeons—but, however this may be, there can be no doubt that the Cardinal was the chronological antecedent of the war.

It broke out in this way. The surgeons, from time immemorial, had been in the habit of using the barbers as assistants in their operations; possibly, in those days of rough cutlery, shaving itself may have been regarded as a minor operation. By degrees, as time went on, they came to be entrusted with the less important details of the surgical art, among others the process of bleeding. This gradual encroachment, occurring partly through the forbearance, perhaps the laziness of the surgeons, partly through the desire of the tradesmen to increase their own importance and profits, was natural enough; but at length, as might have been expected, long established usage *virtually* acquired the force of law, and *actually* acquired it, when an edict of Charles V. (1364-80) confirmed to the barbers, with the right of bleeding, "the right to apply plaisters and ointments, and in general to treat any open wounds and sores." This Charles V. was himself a member of the College of Surgeons—perhaps the only instance of a surgical king. He was always a steady patron of the profession, and hence, according to the surgeons, his historical title of Charles the Wise.

We have now before us a condition of affairs

likely enough to afford abundant matter for illustration of the theories of the psychologist and moralist. We see established in Paris, three distinct corporations—the physicians, the surgeons, and the barbers—the functions of which are very closely analogous. Far at the head, both in social position and legal privileges, stand the physicians. Next in order come the surgeons, discontented with their position of inferiority, conscious of having in one most important respect—practical knowledge of anatomy—the advantage of the doctors, and therefore disposed to encroach as much as possible on their legal superiors. Last of all come the barbers, pressing on the surgeons, and naturally anxious to raise themselves in the world.

Under these circumstances it is easy to see what course of procedure Mephistopheles, had he been at the time dean of the medical faculty, would have advised. "By all means," he would have said, "foment and aggravate, as much as you can, the rivalries and disputes of the two surgical bodies; and, if possible, enter into an alliance with the weaker and more remote body, from which you have the less reason to dread any encroachment on your own domain."

I do not mean to insinuate that Mephistopheles was the dean, but this is exactly what the medical faculty did. They were themselves in want of practical assistance at dissections, and, by associating the shaving fraternity, and thus elevating them in social position, they at once obtained this assistance, and struck a heavy blow to the more dangerous corporation, rival alike of themselves and of the barbers. "As God Almighty, wearied by the ingratitude of the Jews, at last turned his favour to the Gentiles, so," humbly remarked the doctors, "We, wearied with the ingratitude of the surgeons (gratitude for what?) have resolved to adopt the barbers." They actually used this illustration in the lawsuit of 1660.

One great difficulty occurred at the outset of this new arrangement. The barbers were to be admitted to the lectures. It need hardly be said that in so pedantic an institution as the school of the medical faculty, the Latin language was the exclusive medium of communication. But the barbers did not understand a word of Latin —so what was to be done? They had recourse to a strange expedient. We know that of late years a curious language has sprung up at Hong-Kong, Canton, and other Chinese ports open to British traders. Something of the same kind was put in practice in the medical school of Paris nearly 400 years ago, and a sort of, what we may call, Pigeon Latin, was invented as a means of communication with the new associates. To speak French was clearly impossible; and thus the learned world was edified by the spectacle of really accomplished classical scholars, as many of the doctors were, discoursing in a species of gibberish, mainly consisting of French words, with Latin terminations annexed.

The surgeons, roused to fury by this strange compact between the doctors and barbers, lost no time in bringing the whole business before the legal tribunals. They maintained that to teach anatomy was their own peculiar province, and that the doctors in entering upon it were guilty of trespass. The lawsuit was determined by one of those half measures which never content anyone. It was decreed (1498) that in the amphitheatre of the faculty, a *doctor* should lecture on anatomy, but should not touch the body; that a *surgeon* should perform the dissection; and that the barbers might be present and make as much as they could out of the canine Latinity served up for their special benefit.

In 1505 the contract was finally arranged. It was agreed that, on payment of a small fee, and on passing a trifling qualifying examination, the barbers should be admitted as students of the faculty. They were bound by oath to prescribe no internal medicine, and to practice no surgical art *under extern doctors*. On these conditions the faculty undertook to educate them, to become their patrons, and in all emergencies to give them the benefit of their support. From this date the Barbitonsores appear under the more respectable name of Tonsores Chirurgici, their profession being officially recognized as Chirurgia tonstrina. I may here observe that the barber-surgeons of London, incorporated 32, Henry VIII., formed a different kind of union—inasmuch as the act of incorporation explicitly recognized a distinction between the two crafts: the barbers not being allowed to practice surgery further than the extraction of teeth, and the surgeons being expressly prohibited from exercising "the feat or craft of barbery or shaving."

Thus the commencement of the sixteenth century, which saw so many strange revolutions, was also remarkable for this association of a company of humble artizans with the most haughty and jealous scientific corporation in the world. And the circumstance is the more remarkable from the fact that the trade of a barber was at that very time in extremely bad repute—in Germany no artizan could take an apprentice unless he brought a certificate that in his family no barber was to be found.

But the doctors, in thus introducing the barbers into the medical school, did not know what they were doing. The measure was adopted partly out of a selfish regard for their own class interests, partly out of spite; but they manifested a woeful ignorance of human nature, when they assumed that these artizans, now so humble and submissive, would continue to be humble and submissive when they had acquired an amount of professional knowledge, which would enable

them to aspire, with any hopes of success, to equality with their teachers. But a long series of years was to elapse before such pretensions were put forward, and for a considerable period, with the exception of an occasional skirmish, the faculty and their barber pupils worked on harmoniously together. The college of surgeons, on the other hand, enraged at the desertion of their former assistants, renewed with great vigour their attempts to procure their own recognition by the University as forming an essential element in the faculty of medicine. But they were stoutly and successfully resisted. In vain they procured from the Crown edict after edict affirming this right. In 1544, an ordinance of Francis I. enacts that "the said professors (of surgery), bachelors, licentiates, and masters in the aforesaid art, married and unmarried, shall enjoy all such and similar privileges, franchises, liberties, immunities, and exemptions, as the scholars, doctors-regent, and other graduates of our University are accustomed to enjoy and possess." This ordinance was confirmed by Henry II., Charles IX., and Henry III. But the decrees and confirmations were so much waste parchment. In fact it may be observed that, as a general rule, numerous confirmations of the same decree afford strong presumptive evidence that the decree was not observed. The constant demand of the English commons for redress of grievances before granting a supply, shows plainly enough that the grievances were well maintained. The most vigorous assault on the University by the surgeons took place in 1576; it resulted in an undignified resort to physical force. In a general convocation of the University, the surgeons entered, and formally demanded to be admitted as a part of the medical faculty. A terrible storm arose. The M.B.'s and B.A.'s made common cause, and rushed with clenched fists upon the surgeons; the faculty of law, with their usual prudence, beat a retreat; the faculty of divinity were turned out of the hall; and the faculty of medicine, masters of the field, triumphantly dictated to the secretary the sentence to be pronounced—a sentence which, I need not say, was unfavourable to the surgeons.

(To be concluded).

Progress of the Medical Sciences.

REPORT IN MENTAL DISEASES.

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THE publication of the Morisonian Lectures on Insanity for 1873 is continued in the April number of the *Journal of Mental Science;* the fifth lecture, now published, being entirely written by Dr. Clouston, but with constant reference to the notes and verbally expressed opinions of Dr. Skae, whose mantle seems to have fallen upon him. The first portion of the lecture deals with *Syphilitic Insanity*, and it may be interesting to supplement the section devoted to this disease in our former report, with some additional matter thence derived. Dr. Clouston, after referring to Dr. Wille, the latest German writer on the subject, as giving the most complete account of this recently recognized form of insanity, which must be studied in connection with other syphilitic neuroses, goes on to describe its symptoms and pathology. The symptoms are as protean in character as might be expected from our knowledge of other manifestations of constitutional syphilis; but a typical case will run some such course as this:—A syphilitic patient suffers more severely than usual from the characteristic headache, aggravated at night, deeply seated and increased by pressure; and from pains in the neck, and general hyperæsthesia of the nerves. Then comes sleeplessness, sometimes independent of the severe pains, and accompanied by motor and sensory disturbances, such as epileptiform attacks, slight paralyses, disturbances of co-ordination, giddiness, &c., the first mental symptoms being great depression, loss of energy, and hypochondriacal fears. These may disappear under treatment; or loss of memory, passing into complete dementia, may supervene, progressive motor paralysis of the extremities frequently accompanying the mental weakening. Such cases may simulate general paralysis very closely; but the absence of delusions of grandeur, and of "the true general paralytic want of co-ordination of the muscles," with the history, and in most instances the youth, of the patient, are diagnostic. Cases where delusions of grandeur occur may be regarded as cases of general paralysis modified by syphilis. In others, where strong predisposition to mental disease exists, the syphilis may determine the insanity, and, as Griesinger points out, there may be a sudden explosion of acute delirium or mania within a fortnight after infection. The prodromal hypochondria may scarcely exist at all, and the insanity may even precede the usual secondary symptoms. Sometimes the mania alternates with melancholia or with lucid intervals, and sometimes it assumes the character of idiopathic insanity. Dr. Hugh Grainger Stewart, who published three such cases in the *British Medical Journal* for 1870, describes them as having the following points in common:—1. The character of their delusions was that they were the victims of conspiracy, persecution, and spiritual influence. 2. They were dangerous and suicidal. 3. They had hallucinations, and were worse at night; and 4. They suffered from syphilitic cephalalgia. In other instances the insanity follows syphilitic epilepsy or apoplectiform attacks. Dr. Duncan has published two cases of this variety in the *Dublin Quarterly Journal of Medical Science*, 1863; and Mr. H. Hayes Newington and Dr. Batty Tuke others in the number of the *Journal of Mental Science*, for Jan., 1874: pp. 555 and 560. In the same Journal, for Jan., 1875, Dr. Hughlings Jackson has an interesting article on *Nervous Symptoms in cases of Congenital Syphilis*, in which he describes a case which he cautiously heads: "Signs of Congenital Syphilis—Dementia.—Father died insane." Here dementia gradually occurred in a boy of fifteen, who was the eldest surviving member of a family all of whom were afflicted with congenital syphilis.

The connexion between the mental disturbances which occur in syphilitic insanity and the pathological changes found after death, has been carefully studied, but much still remains to be done. Dr. Clouston describes *four* kinds of cerebral lesion resulting from syphilis, and giving rise to insanity. "1. Nodes formed on the internal surface of the skull, pressing on and setting up irritation of the brain. 2. Gummatous tumours of the brain and its meninges, most commonly

the latter. These two forms seem to be very constantly associated with the epileptiform kind of syphilitic insanity. 3. Meningitis, affecting the cortical substance of the brain secondarily, the general result being a sort of glueing of the membranes to the convolutions, to each other, and to the skull. This is usually associated with the typical syphilitic insanity, with its initiatory cephalalgia and hypochondriasis, its gradual loss of mental power, its disturbances of motion and sensation in the cerebral nerves, and its terminal dementia and paralysis. The fourth pathological species of syphilitic insanity said to exist, is a purely hypothetical one. It is described as the irritative form, from cerebral anæmia and the irritant effect of the virus on the central nervous system. "In other words, cases where nothing at all can be found after death are so classed. Such are the cases of acute syphilitic insanity following the infection very soon, and associated with the insane neurosis." Dr. Clouston thinks it quite certain that "a form of insanity may occur as the result of the syphilitic virus, which shows no *post mortem* appearances in the brain after the death of the patient." In some cases syphilitic changes are found in other parts. Dr. Skae believed that insanity is specially prone to occur in the form of syphilis which gives rise to condylomatous tumours.

The prognosis in syphilitic insanity is generally unfavourable; but where the syphilis has merely acted as an irritant upon the insane diathesis it is less so. Convulsions and local paralysis and anæsthesia are of very grave import, and progressive paralysis and dementia render the case almost hopeless; yet even the most desperate case may recover or improve. Relapses are to be looked for.

Syphilophobic hypochondria should not be mistaken for syphilitic insanity.

In Dr. Skae's classification there are three species of insanity connected with the abuse of alcohol, which Dr. Clouston now describes—these being Delirium Tremens, Insanity of Alcoholism, and Dipsomania.

Delirium Tremens.—The symptoms of this disease are too well known to require any lengthened description, the tendency to suicide being the most important of those which are distinctly mental. This, as Dr. Clouston tells us, frequently occurs at the outset of the disease, and is, no doubt, the cause of a large proportion of the two thousand suicides which annually occur in this country. A form of true insanity may succeed the attack, especially in those who have a hereditary predisposition to insanity, or who have had many previous attacks of delirium. It occurs when the acute stage of the disease has passed off, the patient suffering from confusion of mind, with suspicion, and hallucinations of hearing, the suicidal tendency being frequently well marked. The prognosis is favourable if the patient be got out of bed whenever the suspicions appear, and made to walk in the open air, all sedatives being stopped. He should on no account be sent to an Asylum, but may be ordered change of scene, under care of a trustworthy attendant or friend.

Dr. Magnan, in his treatise on Alcoholism, to which the French Academy of Medicine adjudged the Civieux Prize in 1872, and which is reviewed in the *Brit. Med. Journal* of March 13, 1875, p. 346, recognizes two forms of delirium tremens, *simple* and *febrile*, the former being of slight, the latter of grave, import. In the febrile form, the fever is an essential element, does not depend on the pneumonia or other secondary affections which may complicate the simple form, and follows a regular course like other fevers. The treatment in this form consists in preventing the patient from injuring himself and others, in endeavouring to eliminate the poison, and in sustaining the patient's strength. The use of chloral should be rejected "in the acute forms of a kind of poisoning which itself exceedingly compromises the circulatory and respiratory functions."

Insanity of Alcoholism.—This Dr. Clouston defines to be "a slow and chronic form of delirium tremens." As Trousseau says, "the mental phenomena are the same—they develop themselves more slowly, but their change of type is only apparent. Slacken the tumultuous pace of the fancies which jostle and caper in the maniac's brain, and although you do not thereby effect any essential modification, you will completely alter the aspect of his delirium. For the disgust, the repugnance at food which characterize febrile anorexia, substitute passive indifference, absence of appetite—the gastric state of chronic alcoholism. In place of disturbances of vision, or the changing hallucinations of delirium tremens, there are confused perceptions, *muscæ volitantes*, cloudiness, fogginess, and transient flashes of false light." A gradual degeneration of nerve-tissue takes place all over the body. "The intellectual power becomes weakened," says Dr. Clouston, "they begin to exhibit many of the moral perversions and weaknesses, such as cowardice and untruthfulness, which I shall presently describe as characteristic of the dipsomaniac; the motor deficiency is shown by the muscular unsteadiness and trembling which become permanent, though aggravated during the acute outbursts, and there is a sensory paralysis of the limbs." The end is dementia, "the goal of all insanities." Dr. Magnan *(op. cit.)* pronounces chronic alcoholism to be also a cause of general paralysis.

Dipsomania.—This form of insanity, Dr. Clouston, following Dr. Skae, pronounces to be "not nearly allied pathologically to alcoholism." What the pathological differences are he does not very distinctly inform us, but he lays great stress upon the irresistible craving, the periodicity, and the hereditary occurrence of dipsomania, which like other cerebral affections may also be produced by blows on the head. All this is very vague: delirium tremens is, of course, not itself dipsomania, but it is the result of the action of alcohol on some constitutions, and the patient imbibes this alcohol under the influence of a morbid or "irresistible" craving, which is usually periodic and often hereditary; and the insanity of alcoholism, Dr. Clouston pronounces to be "a slow and chronic form of delirium tremens." There are, of course, motor and sensory phenomena in delirium tremens which may not occur, or may be less distinctly marked in the cases which Dr. Clouston would call dipsomania, but the mere fact that the action of the alcohol is different in each class of cases does not prove that the neurosis which leads to the intemperance is widely different in each. The practical point would seem to be that the neurosis of delirium tremens or alcoholism is more curable than that of dipsomania; but even here Dr. Clouston speaks very vaguely. "It (insanity of alcoholism) is a very curable disease at first, but, as most commonly happens, when cured, the cause is soon at work again, and a relapse is the result." Just so; and what is this *cause* which so frequently produces a relapse after the patient has been "cured;" and how does it differ pathologically from the cause of dipsomania? Dr. Skae, in his practical rule-of-thumb fashion, ignoring nice pathological distinctions, tells Mr. Dalrymple's Select Committee that there is "a great variety among drunkards." First, there is the "regular drunkard," who goes to bed drunk every night, and goes about his business next day, none the worse for his liquor. Secondly, there is the tippler, who takes his "nip" at all hours of the day. Thirdly, there is the dipsomaniac with incontrollable craving for anything in the form of a stimulant, who, *faute de mieux*, will drink ink like Porson, or "hair wash," and "shoe-black and turpentine" like some of Dr. Skae's lady-patients. Fourthly, there is the insane patient who drinks—the habit of intemperance being one of a number of other symptoms of mental disease.

In the *Brit. Med. Journal* for Nov. 14th, 1874, there

are two interesting papers on Alcoholism by Drs. Russell and Sutherland, the former dealing with the subject from a clinical point of view, the latter giving some practical hints as to the domestic use of alcohol. Dr. Russell divides habitual drunkards into *vicious* and *morbid* drinkers, and refers to the Blue-book of Mr. Dalrymple's *Select Committee on Habitual Drinkers*, published in 1872, for detailed information on this subject. While acknowledging the danger of weakening the sense of moral responsibility by regarding drunkenness as a disease, and coinciding in the opinion that the consciousness of responsibility should be kept alive as long as possible, even in cases of actual insanity; he fully admits that such a class of morbid drinkers does exist, and requires to be dealt with in a special manner. Dr. Crichton Browne has put the matter in its right light in his answer to the question of the Select Committee: When should restraint be imposed on such patients? "Whenever the craving becomes irresistible; when he (the patient) says that he cannot resist it; when his affections are weakened and his intellect fails, and his will becomes weak, and he neglects his affairs and ruins his family." In such cases the question as to the vicious or morbid origin of this degraded condition becomes of secondary importance, the main point being the restraint or removal of the propensity which is destroying the patient himself and injuring others.

Dr. Russell then proceeds to notice the various points which characterize the disease as distinguished from the vice—its hereditary nature, periodicity, &c. He might have further insisted upon the *voluntary* return of patients to asylums, on feeling the first symptoms of the approaching paroxysm, which clearly indicates their sense of the necessity for some external restraint during a period of temporary loss of self control. This is exactly analogous to the behaviour of many patients afflicted with homicidal mania.

The exciting cause of morbid drinking is frequently, according to Dr. Druitt, in his evidence before the Select Committee, misery, bodily and mental, misery produced by various nervous disorders, or by social and pecuniary troubles. Alcohol in moderate doses, is, as most medical men testify, a specific for many nervous affections and the danger of its abuse when left in the hands of the patient himself is enormous. The boundaries of its legitimate use are easily overstepped, and it ends by becoming the cause of those very troubles which it was called in to allay. Indeed the attention of the Medical Profession has recently been drawn to the fact, that even in the prescription of alcohol by well-qualified practitioners, there exists a grave source of danger. The alarm has been sounded by many eminent physicians, and Dr. Russell is fully persuaded that it is by no means a false or unnecessary one. "One of the saddest cases of alcoholism I have ever attended," he says, "appeared to have originated in a stimulant prescribed by a most cautious physician, for the relief of irregular action of the heart, following a severe mental shock in a very nervous patient." The danger of prescribing stimulants in acute febrile diseases, is of course much less than in nervous cases, where there may be some predisposition to dipsomania; and with some persons any nervous shock or exhaustion produces a condition in which the morbid craving for drink may be very easily set going. Dr. Druitt, in a paper in the *Med. Times and Gazette*, 1862, has described certain nervous conditions which are most liable to induce intemperance. The most important of these is a kind of neuralgia of the abdominal ganglia, which gives rise to many distressing sensations, and notably that of a "sinking at the stomach," or extreme depression. The relief obtained by a little brandy is so instantaneous and complete, that not only the patient but his friends may easily be led on to an *ad libitum* prescription of stimulants in the highest degree dangerous. Dr. Russell gives two cases, the one of a wife who was thus destroying her husband, the other of a nurse who was destroying a lady patient, both with the best intentions in the world, when he stept in to prevent the fatal consequences.

Intemperance in women frequently has its origin in nervous exhaustion, produced by the various sexual functions of menstruation, lactation, &c.; and the difficulties of discovering its existence, and reclaiming the patient are then often very great. The habit may remain concealed from her nearest friends for a surprising length of time; and even when it is suspected or known that she is acquiring it, there is sometimes a weak dislike to withhold the stimulant which has become an apparent necessity. In such cases, and indeed in all cases of secret intemperance in either sex, the medical man is placed in a very difficult position, both as to the formation of his diagnosis, and the enforcement of his directions as to treatment. The symptoms are often obscure, no evidence of hepatic or renal disease may exist, and although the tongue usually presents a characteristic appearance, it may remain perfectly natural. The symptom which Dr. Russell regards as most suspicious is "the loss of appetite, often amounting to an absolute disgust for food, frequently attended with obstinate vomiting, especially when first rising from bed."

Dr. Sutherland gives some interesting cases of dipsomania; one of the daughter of a clergyman, in whom it was not hereditary, appearing after an attack of meningitis consequent upon scarlatina. For five years she suffered from debility, irritability of temper, and weakness of mind, a disposition to lying making its appearance. The treatment resorted to included stimulants and opiates, and she soon began to take chlorodyne and laudanum, at all hours of the day. Then she developed a taste for alcoholic stimulants, frequented public-houses, and was found reeling drunk about the parish. Under medical treatment, carried out with difficulty, she abstained for three months, but then broke out worse than ever, stole a £20 note from her father, pawned a watch, and obtained £50 worth of clothes from her friends on pretence of going out to India. Finally she left her home (for the third time) and was found in a lodging-house in London, having a few days previously been picked up by the police in an area and taken to the station-house.

Dr. Sutherland's hints to moderate drinkers are too long to be transcribed in full. The gist of them is as follows:—Don't take any stimulant before lunch, if you do you are in danger. Drink only brown sherry, and never more than *four* or less than *three* glasses a day. (Why not less than three?) If you wish to become a teetotaller take two years over it at least. (Why not two months?) Never touch spirits, raw or diluted, except after great exposure to cold or wet, never liqueurs. Never take hock at dinner parties, and if you drink champagne dilute it with Seltzer water. Never drink wine undiluted or on an empty stomach. "Brandy and soda-water should be avoided as rank poison; diluting the brandy does not destroy its pernicious effects; and the soda-water, by its bulk, acts most injuriously by separating the food from the walls of the stomach, thus preventing the gastric juice from having free access to it." It may be added that both grog and brandy and soda-water, are insidious drinks, well calculated to encourage the habit of tippling. Ladies may take one glass of claret or sherry at lunch; one and a-half ordinarily at dinner; one of champagne, and one of claret at dinner-parties; and two of champagne and seltzer at balls.

Mania e Potu.—Mr. Hayes Newington has (*Edin. Med. Journal*, for Dec. 1874), described a form of transient mania resulting from alcoholic poisoning in persons predisposed to insanity: a small dose is sometimes sufficient to produce it. Dr. Sutherland gives an interesting case of this kind in his paper. An officer, aged

24, not in the habit of drinking much, drank at a club dinner a bottle of champagne, besides sherry, hock, claret, and two glasses of brandy. "He soon became much excited and executed a 'view-holloa' in the club-dining-room," then left the club, had two more glasses of brandy, and ran a-muck in the streets, striking a passer-by and tearing down a large advertisement. He was removed to his lodgings with some difficulty, and then attempted suicide with a razor, boxed at his looking-glass, and attempted to throw himself out of the window, before he was finally got into bed and strapped down. Next day he was apparently quite well, and left town.

Dr. Clouston's lecture concludes with a notice of some rarer forms of insanity catalogued by Dr. Skae.

Malarious Insanity.—Griesinger has described two cases of insanity occurring in a malarious district, the one assuming a tertian the other a quartan type, and both cured by quinine; and there is a form of malarious melancholia well-known in America under the name of "dumb-ague."

Pellagrous Insanity occurs in connection with Pellagra, the disease produced in Italy and France, by the use of diseased maize. The mental phenomena are very strange. There is great "moral impressibility," and the insanity suddenly blazes out on the smallest provocation. For example, says Professor Lombroso, who has described it, "a woman believes herself to be lost because she has missed Mass; another person is in despair, and goes mad because he has lent a pistol to a friend who will not return it. A woman hears her companions laughing at her dress, and becomes insane from grief; another, merely because her husband, a fisherman, is a few minutes late, breaks out into violent mania." *Hydromania* is the most characteristic symptom; in some cases water being longed for, on account of its coldness or shining surface, in others dreaded, from the vertigo which the sight or touch of it produces. The patients who enjoy the glittering of water, are also fond of fire, and will burn furniture to see the blaze. The disease, with its insanity, is only to be cured by arsenic.

Post-febrile Insanity occurs after all kinds of fever, but it is most common after scarlatina. Out of ten cases collected by Dr. Clouston, four followed scarlatina, two small-pox, one typhus, one typhoid, one intermittent, and in the remaining case the form could not be ascertained. The insanity of scarlatina, is a form of partial dementia, with periods of excitement and irritability. That of small-pox is very similar, but "even more incurable." That of typhus and typhoid appears after some weeks of convalescence, an attack of acute excitement being followed by great depression. Tuke, Bucknill, and Maudsley, pronounce that of typhus to be worse than that of typhoid. Sydenham describes a form of mania following ague, especially if of long continuance and of the quartan type. "If treated with strong evacuants it degenerates into hopeless fatuity."

Of Dr. Clouston's ten cases only two had acute symptoms, and they alone recovered; six of the others remained hopelessly demented, and two hopelessly melancholic. Hereditary predisposition existed in but three cases.

One fact with regard to febrile delirium is worth notice. Dr. Clouston has never seen it run without intermission into acute maniacal excitement, however predisposed to insanity the patient might be.

Insanity of Oxaluria and Phosphuria.—The "chemical physicians" deny the essential connexion between oxaluria and insanity, oxalates frequently occurring in large quantities in the urine of healthy persons. The best proof of the relation which exists between them consists in the disappearance of the mental symptoms when the oxalates have disappeared. Golding Bird describes patients affected with oxaluria as being extremely nervous, depressed, hypochondrial, and frequently imagining themselves consumptive. Phosphuria also produces hypochondria, "want of energy and originating power," and irritability. Melancholia with suicidal tendencies may occur in either condition.

Insanity of Bright's Disease usually occurs in chronic cases with contracted kidneys, and is due to uræmic poisoning. It is half delirium and half mania, and may pass from morose irritability to exaltation and excitement.

Ætiology and Prophylaxis.—The ætiology of insanity is necessarily still a very imperfect science, depending as it does to a large extent upon a knowledge of the laws of hereditary predisposition which are so obscure in their working. The chapter in which Dr. Hack Tuke treats of the subject, in the new edition of Bucknill and Tuke's *Manual of Psychological Medicine*, may be referred to as giving a good summary of the opinions now current; yet, as the author would himself admit, it is far from being satisfactory. We are still in the stage at which the first glimmering of light makes the surrounding darkness visible. As in every branch of social science, we find a battle of statistics against statistics, and opinions against opinions; yet, on the whole, we are advancing with surprising rapidity, the difficulties of the subject being taken into consideration.

Dr. Tuke adopts the usual division of the causes of insanity into *predisposing* and *exciting*, the former being chiefly physical, the latter partly physical and partly moral.

Predisposing Causes.—Dr. Tuke is necessarily rather vague in treating of this part of his subject, but regards civilization, certain modes of life, hereditary tendency, and temporary conditions of the parents at the periods of procreation, conception, and gestation, as the most important of these. Of *civilization*, he says, that after making allowance for increased facilities for obtaining a knowledge of the number of the insane, "there can be little doubt that insanity attains its maximum development among civilized nations;" that the causes which tend to produce it, increased emotional susceptibility, intemperance, overwork of the brain, the debased condition of the lower classes, and the general high-pressure excitement attendant on civilization, at present outweigh the circumstances which favour mental health; that our civilization being still imperfect, it does not follow from this that "a civilization, which should exactly temper the force of the emotions, moderate intellectual exertion, and banish intemperance," would breed insanity; and yet even this, he thinks, would be more dangerous to the mind than barbarism.

With regard to *modes of life* and particular *occupations* nothing very definite appears to be ascertained.

Hereditary Predisposition.—The per-centage of insane patients in whose families insanity can be traced varies very much according to different observers. Guislain estimates it at 30 per cent., Holst at 69 per cent., Jessen at 65 per cent., while Parchappe makes it as low as 15 per cent. In York Retreat, from 1796 to 1840, the statistics show that in one-third of the cases there was *direct* hereditary predisposition, and Dr. Thurnham states, that if those cases in which there was insanity of collateral blood-relations were included, the proportion would rise as high as one-half, or 51 per cent.

It must also be remembered that other nervous diseases, such as epilepsy, chorea, hysteria, hypochondriasis, neuralgia, &c., are nearly connected with insanity, and may alternate with it in descending from parent to children.

The insanity of the mother is, according to Baillarger, more serious than that of the father, being not only more frequently hereditary, but implicating a greater number of children; the mother's insanity is more dangerous to the girls, the father's to the boys; the mother's being little more dangerous to the boys than the father's, but twice as dangerous to the daughters.

Dr. Brigham supports him in the two former of these conclusions.

Consanguineous marriages are dangerous to the offspring, according to Dr. Jarvis, not from the bare fact of the parents' relationship, "but in the fear of their having similar vitiations of constitution."

Closely connected with hereditary predisposition are other influences which affect the child before and during birth. The condition of health, &c., of the parents during procreation, conception, and gestation, undoubtedly plays an important part in determining the diathesis of the child. Tuke mentions the well authenticated fact, that children begotten by a drunken parent are often of weak mind; but beyond this it is difficult to trace the connection between transient conditions of the parents at the period of procreation and defects in the offspring; and the subject of the influence of maternal impressions requires much investigation. Some cases of constitutional nervousness have been traced to fright in the mother during gestation. Hobbes says that his mother being alarmed by the firing at the time of the Spanish Armada "brought forth twins, myself and fear;" and there are instances in which imbecility in a child has been traced to maternal fright.

Injury to the head during birth, either from that disproportion between the size of the head and that of the pelvis which Dr. Browne believes to be a product of civilization, from instrumental delivery, or other causes, sometimes produces idiocy; and even after birth the milk of a nurse strongly predisposed to insanity may affect the child.

Under the head of *Exciting Causes* Dr. Tuke enumerates Intemperance, Epilepsy, Affections of the Head and Spine, Uterine Disorders, Sexual Vice, Febrile Diseases, Domestic Trouble, Religious Anxiety and Excitement, Disappointed Affection, Fear and Fright, Intense Study, Political and other Excitement, Wounded Feelings.

Into the details of these it is impossible now to enter, but the question of *prophylaxis* still remains to be briefly considered. What measures should we adopt to check the progress of that neurotic degeneration in the human race of which insanity is a symptom? The problem is probably the most important with which the student of preventive medicine has to deal, involving as it does all those problems of breeding and education which are now perplexing sociologists; and the main difficulty of it lies in the fact that it demands the production of a soundly-bred and wisely-reared race from a race to a large extent viciously-bred and badly-reared. How, then, are we to set about improving the breed of mankind? The first answer which must occur to everyone is that we should endeavour to prevent the breeding of the most degenerate individuals. But the difficulties of this are obvious. The genius of civilization, with its feeling for the liberty of the individual, is against such arbitrary proceedings as those taken by barbarous nations to ensure a healthy stock—the killing of feeble children, the castration of diseased men, and banishment of diseased women; and such an authority as Maudsley is doubtful as to how far our knowledge of the laws of hereditary predisposition would warrant us in preventing the marriage even of patients who have been insane. Insanity is so closely connected with genius that we may find it hard to eradicate the one without interfering with the other; while marriage may cure an individual, and especially a man, of insanity, and the taint may not show in his offspring, or in but a small proportion of them. Much must be left to public opinion, each particular case being decided on its own merits; but even now there are many cases in which marriage can only be regarded as a crime, and *is* so regarded by all thinking persons. But beyond the mere question of marriage, lies the deeper question of the state of the parents at the period of conception. If, as the Marriage Service puts it, "the Procreation of Children" be the principal object of marriage, it is surely right that there should be an honest endeavour on the part of parents to perform this duty to the best of their ability. It should not be performed in the hap-hazard fashion in which it is at present, as though children were really "sent" in a quite "providential" manner, and without the intervention of human agency. If the parents be not able to attain to perfect sanity and health, they should at least not perpetrate the initial act of parentage when one or both of them is actually insane, in worse health than usual, or in any degree under the influence of alcohol. The principal responsibility rests with the man in such cases, the "rights of the husband" often being the wrongs of the wife and the children and the race in general. It is quite time that those who have the education of the human male should by some means drive or hammer it into his dense moral consciousness that his procreative power was not given him solely as a means of amusement, and that women have other functions besides that of ministering to his, often morbidly excited, appetite. The truth is that a large portion of the sexual vice and disease which exist arises from gross ignorance, in both sexes, of the simplest laws of sexual hygiene. At present the general run of boys and girls are suffered to arrive at puberty totally ignorant of the nature of the sexual functions then established, or deriving a half-knowledge from the worst possible sources. To many girls the first occurrence of menstruation, the consummation of marriage, and the occurrence of pregnancy are matters of disgust and horror;(1) while boys are liable to fall into all sorts of evil habits without a thought of the fearful consequences, not only to themselves but to others, which may ensue. In the case of girls it may be all right that they should go to the altar as ignorant and as "innocent" as sheep in the old times of burnt offerings; but how about boys? Are they so immaculate that it would be perilous to interfere with those unsophisticated notions respecting sexual matters which they are so prone to imbibe from the social atmosphere in which they move? Would it really be dangerous clearly to define for the average boy of civilization the new responsibilities which devolve upon him at puberty, and to disabuse his mind of the vulgar errors which he is pretty sure to catch by contagion—to point out, for example, that strong appetities, far from being a mark of vigorous manhood, are often an indication of incipient mental disease; and that in giving the rein to his lusts he is impairing the inhibitory power of his brain, and thereby weakening his whole character? But really it is by no means boys alone who stand in need of a little sound teaching on such matters: there are multitudes of grown-up men that consider themselves well-educated, who are in this respect almost as ignorant, if not as innocent, as schoolgirls. The fig-leaf of modern propriety hides very strange things. In reading such anecdotes as those given by Dr. Acton, respecting the marital excesses committed by medical men, in pure ignorance,(2) who can wonder that the still more ignorant general public should commit still more outrageous excesses; and who can help suspecting that the part played by male incontinence in the production of nervous diseases is much greater than writers on the subject are willing to admit?

Closely connected with the vice of incontinence is that of intemperance; for though it is true that the final result of drinking is often decay of the sexual appetite, it is no less true that, speaking generally, the one vice begets the other. Space will not, however,

(1) See Dr. Tilt's "Principles of Female Hygiene."

(2) *On the Reproductive Organs.* 4th Edition: p. 104. There is something quite pathetic in the story of the Medical man, who having thus exhausted himself, goes to another intelligent Practitioner for aphrodisiacs, and is treated by him without success.

permit of a discussion as to the means which should be, and are being, taken by the medical profession to check the spread of intemperance. There is no doubt that much has recently been done by those who have specially studied the subject, to awake the profession at large to a sense of their own responsibility in the matter; but it is to be feared that a good deal of apathy still remains to be overcome in this quarter. The drinking habits of society are probably worse now than they were twenty years ago, and it behoves us to make a more vigorous protest against them than we have yet made. The barbaric banquets which so frequently appear on the tables of medical men are not calculated to improve the hygienic ideas of the general public; while there is often too much of an inclination on our part to pooh-pooh the honest endeavours of the laity to do some of the philanthropic duties which we, who affect to be "experts" in all branches of social science, have left undone.

In conclusion, it may be remarked that the prevention of insanity largely depends upon what Doctor Maudsley, in his very suggestive, if not very profound, work on "*Responsibility in Mental Disease*," calls "the organization of the moral sense;" and this is not to be effected by the preventive physician single-handed. He may say to the modern man, as Goethe said, "thou ailest here and here," and may suggest remedies, but these remedies must often be applied by other hands than his. "The ordinary education of the day," as Doctor Maudsley complains, "systematically leaves undeveloped a vast amount of mentality in the race;" and perhaps the most important faculty of the mind, the capacity for wholesome enjoyment, is left least developed of all. The education which shall create in us spiritual aspirations instead of sensual lusts, make us the servants of noble enthusiasm instead of the slaves of brutal excitement, and that, rousing us from the lethargy of our vulgar and selfish pleasures, shall awake us those higher senses which respond to the touch of every pure delight, is still to seek.

Extracts from Journals.

KOUMYS has been used in phthisis largely by the Russian physicians, and somewhat by the French. Its good effects are specially manifest in patients affected with phthisis accompanied by nervous erethism without much fever; where gastric troubles complicate the disease the effects are truly surprising. Amelioration takes place as follows:—Sleep returns, the fever disappears little by little, the pulse becomes full and moderate, the cough diminishes, the sputa after a few days of treatment cease to be purulent, become mucopurulent, and then mucous. The appetite increases; vomiting, if there are dyspeptic complications, ceases or diminishes. Presently the strength returns, and the weight increases. Usually patients soon become accustomed to the taste, and take the remedy even with pleasure. In three cases of albuminuria, koumys gave good results. In chlorosis and chloro-anæmia, with dyspeptic complications, where iron is not well borne, a few weeks of koumys will prepare for its subsequent exhibition. The treatment by koumys should last at least six weeks. The patient should take from one to four bottles per diem, preferably neither fasting nor immediately before or after a meal, though the time is to a great extent a matter of habit. Koumys No. 1, containing two per cent. of alcohol, is that in ordinary use. With gastro-intestinal complications, vomiting, diarrhœa, etc., or in profound asthenia, No. 2, containing three per cent., may be used.—*Journal de Thérapeutique* and *Boston Med. and Surg. Jour.*

EXTERNAL URETHROTOMY.—Güterbock (*Archives für Klinische Chirurgie*, Vol. XVI. 1874) has an interesting paper on the indications and performance of this operation, which he thinks should be resorted to at once in all case of traumatic injury to the perineal urethra, as well as in many cases of narrow stricture complicated with false passages. He prefers to open the urethra in front of the lesion and incise from before rather than to open it at the apex of the prostate as advised by Simon and Cock. Following the practice of American surgeons, he disapproves of the tied-in catheter except in cases where the urine is strongly ammoniacal; here the catheter may be tied in till the wound has granulated. Thirteen cases, seen in the wards of Wilms, are related; of these, six proved fatal from secondary hæmorrhage, showing the necessity of careful hæmostasis after this operation. Three days after the operation, it is generally advisable to introduce a large sized instrument, with a view to preventing contraction of the newly made canal; this measure should be repeated every two or three days. In some cases, however, no instrument should be passed through the urethra for several weeks.—*Boston Med. and Surg. Journal.*

PULSATION OF RETINAL VESSELS.—Dr. Jos. Jacobi, of Breslau, discusses in a preliminary note the cause of the pulsations in the fundus occuli, and more particularly why it is in the majority of cases confined to the disc and limited by its margin. He suggests as an explanation the greater density of the tissue forming the edge of the papilla, which, when the intra-occular pressure is increased, may pinch the vessels as they pass across it on their way from the less resisting and softer tissue of the nerve which so constantly yields when the tension is permanently increased, and thus forms the so-called excavation which is so common a sign in those cases where the pulsation are best marked, *i.e.*, glaucoma.—*Centralblatt*, No. 2, 1875.—G. F. Y.

CANCEROUS ULCERS.—Mr. Fawcett Battye recommends the following lotion as a valuable agent in the treatment of cancer when presenting a raw surface, or where mucous surfaces are involved:—℞.—Liq. arsenicalis, ʒiss, vel ʒij; tinct. conii, ʒss; sodæ bicarb., ℈j; aquæ ad ʒviij.—M. Half an ounce to be used every night with an equal quantity of warm water, as an injection or lotion as the case may be. It relieves pain, destroys odour, and makes the ulcerated surface healthier and cleaner. It is also said to be very beneficial in cases of chronic ulcers or fistulæ.—*Edinburgh Med. Jour.*, Nov. 1874.

VASO-MOTOR NERVES OF LUNGS.—Recent observations of Badoud (*Ueber den Einfluss des Hirns auf den Druck in der Lungenarterie.* Würzburg. 1874), seem to show that the blood-vessels of the lungs are kept in a state of very moderate tonic contraction under the influence of vaso-motor nerves. This observer, working under Fick's directions, measured the blood-tension in the right ventricle of dogs by means of a glass tube introduced through the jugular vein. The tension in the right ventricle during the systole is, of course, the maximum tension which can prevail in the pulmonary artery. The tension in the carotid artery was measured at the same time by a spring manometer. Section of the cervical cord was found to cause in the pulmonary circulation a considerable, and in the systemic circulation a much greater diminution of blood-tension. This shows that the normal tonicity of the pulmonary arteries is less than that which prevail in the systemic circulation. Irritation of the cord caused a rise of blood-tension in both the pulmonary and the systemic circulation, the rise in the former system of vessels being so great that it could not be regarded as a secondary effect of a contraction of the systemic arteries forcing the blood back upon the lungs, but indicating rather the existence of vaso-motor nerves in the pulmonary vessels themselves.—*Boston Med. and Surg. Journal.*

ERGOT IN CROUPOUS PNEUMONIA.—Dr. Wycisk, acting on the principle that this drug contracts the vessels and so prevents exudation from them, has treated six cases of croupous pneumonia in this way, and gives (*Allg. Med. Central Ztg.*, 88, 1874, and *N. Y. Med. Rec.*) the following report:—In one such case, marked by an excessive highly albuminous expectoration, it ceased entirely two hours after the administration of the drug in powders of nine grains each every quarter of an hour. The abundant râles in both lungs soon diminished, so that there was only a slight crepitation at the original focus of the disease. These good effects lasted for two days. Two relapses occurred, however, but the same good effect was again obtained by the administration of the ergot. After the second relapse, ten drop doses of the tincture of ergot were given four times daily, until convalescence was fully established. In the five other cases the ergot was used early, and none ended fatally, none became chronic, and none left appreciable deposits behind them; in all of them the exudation was decidedly checked by the ergot. It is, however, held to be a dangerous remedy when the lungs are considerably infiltrated, where there is emphysema, where the cerebral arteries are weak, and where the patients are feeble or decrepid.

DIFFERENTIAL DIAGNOSIS OF BONY AND FIBROUS ANCHYLOSIS.—It is important to be able to distinguish fibrous anchylosis from bony, as the management of the two conditions is conducted upon entirely different plans. The following is given, by Professor Sayre, as a reliable rule for the diagnosis:—In those cases which most closely assimilate bony anchylosis—for it is in such that differential diagnosis is most difficult—if movements are made at the joint, and any motion whatever is secured during the manipulation necessary to a thorough examination of the case, it will be followed by more or less of pain within twenty-four hours. This is a distinguishing feature of cases of *fibrous* anchylosis. For when bony anchylosis is present, no movements at the joint can be made, consequently pain will not be produced at the point of anchylosis. The subsequent occurrence of pain in and about the joint, even if there be no apparent motion, will justify a resort to measures calculated to give to it gradual restoration of motion.—*N. Y. Med. Record.*

CEREBRAL RHEUMATISM.—Amongst the complications which threaten rheumatism none are more formidable than those which attack the brain, and which for want of a better name are designated cerebral rheumatism. They are not always of the same form or gravity, and their cure sometimes supervenes without any active treatment. Sometimes chronic delirium results, and forms the beginning of a variety of mental alienation now well known. The favourable cases are not the most frequent. Amongst the phenomena observable in cases which terminate fatally, there are two which are of great value in prognosis, viz:—extreme elevation of temperature, and sudden and complete disappearance of pain. When delirium occurs in such circumstances death is not far off. Coma succeeds the delirium, and death follows in a few hours. Dr. Blachez reports at much length a case in which, following the example of his colleague, Dr. Raynaud, he had the patient placed in a cold bath at a temperature of 73°·4 Fah. (23°. C.), which was gradually lowered by addition of ice to 68°, and kept therein an hour and a-half. The result not having been discouraging, the bath was repeated ten times at temperatures varying from 61° F. to 77° F. (16° to 25° C.) within four days, after which the patient regained consciousness, and subsequently recovered health. The lower temperature had to be abandoned as its immediate effects were alarming.—*Gaz. Hebdom.*[1] D. F. B.

(1) Cf. an admirable article on this subject by Dr. Da Costa, in the *American Journal of the Medical Sciences*, Jan. 1875.—ED. I.H.G.

RESISTANCE OF PROTOZOA TO DIFFERENT AGENTS.—M. Demarquay has read before the Academy of Science, an essay on the resistance of protozoa to the different dressings generally employed in surgery. In one series of experiments he collected in vessels a number of albuminous liquids obtained from the sick, and after waiting for the development of protozoa, added dilute carbolic acid, alcohol, tincture of eucalyptus, balsam of Peru, tincture of myrrh, tincture of benzoin, spirit of camphor, turpentine and tannin, respectively; but none of these substances had the least effect on the motions of the protozoa. In another series of experiments he introduced the same substances into the albuminous liquids before the development of the protozoa, and found that the ultimate genesis of the latter was not prevented. He observes that it is not therefore in different forms of dressing that the most effectual means of hindering the action of those elements of destruction are to be found, but in the vital force of the patient, and the salubrity of the locality; and he agrees with M. Sédillot in regarding these as highly important conditions.—*Gazette des Hôpitaux.* D. F. B.

RELATION BETWEEN THE PULSE AND TEMPERATURE.—Dr. Alphonse Belugou gives the result of several instances in which he has observed modifications of the pulse and of the temperature in health and in disease. He finds that in health there is a constant relation between the pulse and temperature. In his observations in cases of pneumonia he ascertained that when the disease was regular and normal the relation of pulse to temperature was as close as possible, the curves being absolutely parallel at all periods; but in fatal cases this relation did not hold, wherefore discordance between the pulse and temperature indicates a grave prognosis. There is no malady in which the variation in the rate of the pulse and height of the temperature are so marked as in typhoid fever, and their comparison he finds of no advantage towards either diagnosis or prognosis, except that when the pulse and temperature rise at the same time the prognosis is gloomy. In smallpox there is an agreement between the variations of pulse and temperature. In regular, intermittent fevers there is an agreement between temperature and pulse in the first and last stages, but in the hot stage they disagree.—*Gazette Hebdomadaire.*

Reports of Societies.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

Wednesday, May 12th, 1875.

The President of the College, Dr. DUNCAN, in the Chair.

Cases of Acute Rheumatism presenting anomalous Symptoms.

DR. DUNCAN read the history of three cases which presented the ordinary symptoms of acute articular rheumatism, with the exception that there was no redness of the affected joints, and that there was in each pain and tenderness of some part of the spinal column, and an absence of reaction in the urine. This latter symptom formed the indication for treatment which consisted mainly in the administration of a dilute muriatic acid mixture, with quinine and opium, and tincture of the perchloride of iron. With the appearance of an acid reaction in the urine convalescence was established. Dr. Duncan said that he was unaware until he had drawn up his paper, that a similar treatment had been adopted by others. He had since ascertained that Dr. J. Russell Reynolds[1] had used the perchloride of iron

(1) *British Med. Journal*, Dec. 18th, 1869.

with benefit in several cases of rheumatism. He gave from 30 to 40 minims of the tincture every sixth hour, and his cases terminated favourably in fifteen days. Dr. Duncan thought that whatever part the administration of the hydrochloric acid played in the instances brought forward—for it was freely admitted that the adjuncts of the treatment might have had a good deal to do with their quickness of termination—it certainly relieved the patient; and that the larger the dose, and the shorter the interval in the administration, the more striking was the benefit. The causation of rheumatism being now so generally believed to be the preternatural presence of lactic acid in the system, the proper antidote for which consisted in the administration of some suitable alkalies, the mode of treatment here announced by the author would appear to some perhaps mistaken; and it was with the object of stimulating his brethren to a closer observation of facts, and to a more searching inquiry into the effects of remedies, that he had brought forward these views.

Dr. Foot said that probably the alkalinity of the urine in the cases brought forward depended upon the chemical form in which the phosphoric acid existed in the urine. He had observed alkaline urine in rheumatism, and had explained its occurrence by the presence of the neutral phosphate (which had an alkaline reaction), and which he traced to embarrassment of the pulmonary or cutaneous functions.

Dr. Henry Kennedy referred to the remarkable fact that in former years when bleeding was a favourite treatment in acute rheumatism the blood taken was invariably buffed and cupped. Of late years when Dr. Law used still to practice a moderate bleeding, the blood did not present this marked fibrinous appearance. He (Dr. Kennedy) was in favour of the alkaline and opium treatment, but he had met with cases that resisted it, and in these had found that the addition of a little wine had an immediate favourable effect. The President's treatment was complicated; other remedies besides acids being given. He thought that there were various forms of the disease which ought to be treated by tonics instead of alkalies.

Dr. W. G. Smith asked whether it was fair to take the reaction of any single fluid as an indication of the condition of the patient? In health the different fluids of the body had different reactions, and it might be questioned whether the theory of the alkaline treatment of rheumatism which was based on the chemical testing of the urine was well-founded or not.

After some remarks from Dr. Pollock, the President replied.

A Case, Illustrating the Benefits of Thoracentesis.

Dr. Finny read a paper based upon the case of a coachman, aged 26, who was admitted into Hospital 18th January, 1875, with acute pneumonia of the lower lobe of the left lung. Two days subsequently pericarditis developed itself, and in two days more symptoms indicative of a rapid serous effusion into the left pleura and pericardium were recognized. A pustular eruption was also now noticed on his forehead. The left side of the chest was, on the 15th Jan., ¼ths of an inch larger than the right, and on the 23rd, 1¼ inch more. On the latter date the heart was considerably displaced to the right side; hepatic dulness extended to four inches below the ensiform cartilage; there were frequent fits of dyspnœa; the skin of the thorax was œdematous; the pulse 132, and the respiration 34 and shallow. In the evening 29 oz. of healthy pus were drawn off by the aspirator; the treatment which had been tried during the ten days the effusion had existed having failed to show any effect on its progress. The patient experienced great relief from the operation, but the following day pleurisy of the right side supervened. The left side began again to fill up, and on the 25th Jan. 75 oz. of healthy pus were drawn off, a severe fit of coughing preventing any more being removed. He improved until Feb. 1, when the pulse and temperature again rose simultaneously with a refilling of the left side. Hectic fever set in, and the aspirator was used a third time on Feb. 10; 90 oz. of pus were then drawn off. On the 21st of the same month 40 oz. more were removed, the latter portion being sanguinolent. On this occasion 8 oz. of warm water were injected into the pleura, and having been drawn off, the side was strapped. Thoracentesis had again to be employed on March 3rd, with the result of evacuating 48 oz. of fœtid pus. On the 5th a drainage tube was introduced through a single opening. A quantity of fœtid gas escaped, and 20 oz. of fœtid pus were drawn off. Thus in six tappings 272 oz. altogether were evacuated. All feverish symptoms disappeared subsequent to the introduction of the drainage tube. The chest was strapped; he improved steadily; the flow of pus was gradually arrested; the lung became re-expanded, with the exception of its lower lobe, and the patient was discharged Hospital on April 6th.

Dr. Hayden said that Dr. Finny's paper was illustrative of the necessity for early operation in cases of this kind. He had adopted the same plan of treatment in a somewhat similar instance, in which he had no doubt death would have resulted if the operation had been refrained from.

Dr. Henry Kennedy had cured all his patients by applying large blisters and bringing them under the influence of mercury.

Dr. Sigerson asked whether the expectoration in Dr. Finny's case had ever been albuminous? He alluded to several cases in which this symptom had been noticed after thoracentesis,(1) and to the occurrence of acute œdema of the lung after the operation, causing death by acute asphyxia. The fluid should be drawn off gradually.

Dr. Gordon said that when there was a large quantity of purulent matter in the cavity of the pleura, the sooner it is evacuated the better. His experience was that in cases of empyema the ordinary trocar or cannula was the best instrument to use. There were two different causes of death. In cases which terminated fatally after the use of the aspirator one, as Dr. Sigerson had observed, was the forcible expansion of the lung and effusion into the air-cells and bronchial tubes. Another was, as had been noticed long ago by the late Professor Adams, an escape of blood from the surface of the pleura to fill up the vacuum formed by the forcible evacuation of the fluid from a cavity in which the lung was so forcibly compressed as to be incapable of expansion. In his, Dr. Gordon's, opinion the drainage tube cannot be inserted too early. In fact it should be used as a curative means, and not as a measure of necessity when the matter becomes fœtid. If he had to operate a second time he generally introduced the drainage tube on that occasion.

Dr. Foot had noticed acute œdema of the lung as a cause of death after thoracentesis, and he had preferred Rasmussen's instrument to that of Dieulafoy's, because, with the former, the vacuum was merely made by the hand; hence, the slightest pressure could be felt on the piston, and the operator could stop whenever he pleased. Whenever putrefaction of the contents of the pleural cavity occurred the sooner a free and permanent opening was made the better; but, where that did not take place he thought it was better not to introduce a drainage tube. He had had a case of chronic empyema under his care which had been tapped nine times, and the man had survived five years, and had never had any fever. The last time he (Dr. Foot) saw him, he considered him sufficiently well to be able to go to America.

Dr. Finny having replied, the Society adjourned until next Session.

(1) *Vide* Irish Hospital Gazette, Vol. I.: pp. 206, 263, and 370.

IRISH HOSPITAL GAZETTE.

VOL. III.] DUBLIN, JUNE 15, 1875. [No. 12.

EDITORIAL ANNOUNCEMENT.

THE Editor of the IRISH HOSPITAL GAZETTE having made arrangements to amalgamate this Journal with the well-known and long-established *Dublin Journal of Medical Science*, begs to inform Subscribers that the publication of the IRISH HOSPITAL GAZETTE as a distinct Journal will cease with the present issue.

In thus uniting with the *Dublin Journal of Medical Science*, the Editor of the IRISH HOSPITAL GAZETTE has the pleasure to announce that he brings with him to it, promises of support from those who have so materially assisted him in the establishment of this Journal. To these Gentlemen the Editor is mainly indebted for the favourable reputation which, it is believed, the IRISH HOSPITAL GAZETTE has acquired in the comparatively short period of two and a-half years; during which time also, he is pleased to think, it has been the means of bringing before the Profession several valuable communications.

In addition to the Half Yearly Reports already appearing in the *Dublin Journal of Medical Science*, supplementary reports in other special subjects, by some of the able writers of the "Reports in the Progress of the Medical Sciences" which have formed so highly appreciated a feature in the GAZETTE, will be published in the amalgamated Journal.

The amalgamation will come into effect on the 1st of July next, on which date the sixtieth Volume of the *Dublin Journal of Medical Science* commences. For further particulars as to the programme intended to be pursued in it, we would refer to the announcement published in the current number of the *Journal*.

We earnestly hope that the contributors and subscribers to the IRISH HOSPITAL GAZETTE—whom we take this opportunity of sincerely thanking for their warm support in the past—will continue to assist us in this combined effort to produce a high-class representative Journal, worthy of the Irish School of Medicine and Surgery.

GEORGE F. DUFFEY, M.D.

Original Communications.

ON THE USE OF THE CALABAR BEAN IN TETANUS; WITH AN ILLUSTRATIVE CASE.

By T. E. LITTLE, M.D.,
Surgeon to Sir Patrick Dun's Hospital.

THE question of the treatment of tetanus by means of the calabar bean having been several times lately ventilated in the pages of the IRISH HOSPITAL GAZETTE,(1) I desire to contribute the details of, and a few short remarks upon, the following case, in which this drug got a full and fair trial, to the discussion regarding its merits. The fact that the results of the trial in this instance were almost entirely of a negative character, by no means militates against its importance or significance as a piece of evidence in the question. In the endeavour to estimate the real value of any form of treatment which may be *sub judice*, it is as much the duty of the practitioner, and as important for arriving at the truth, to report the unfavourable as it is the favourable cases.

I was induced to employ the drug by the following considerations:—(1), Theoretically, there exist some grounds for thinking that the normal physiological action of the *physostigma venenosum*, as indicated by experiments upon animals, is directly antidotal to the excited condition of the spinal cord, more especially in reference to its reflex functions, which constitutes the most essential element of tetanus. The experiments of Fraser(2) indicate that the most prominent feature of the physiological action of calabar bean is "of such a nature as to weaken and then destroy the reflex function" of the spinal cord; and, in reference to this particular, his observations (as far as I am aware) have not been controverted by, but have the rather been confirmed by, other observers (Nunneley,(3) Laschkewich,(4) and many others). Animals experimented on by moderate doses first experienced slight muscular twitchings; then paralysis of the extremities occurred, commencing gradually in the hind limbs; the pupils became contracted; respiration became slow and laboured; and finally, no reflex movements whatsoever could be induced. The remarkably opposite

(1) See Vol. II.: Pp. 245 and 339, for Cases by Drs. Shinkwin and Hobart, and Vol. III.: p. 145, for a Case by Dr. Hayes.
(2) *The Jour. of Anat. and Phys.*, May 1867: p. 323.
(3) *Lancet*, 1863, Vol. II.: p. 475.
(4) *Virchow's Archiv.*, Februar. 1866.

character of these symptoms, and of those of strychnia poisoning, is immediately striking, and forms an additional reason for believing in the antidotal nature of the influence of the calabar bean to tetanus. Dr. Keyworth (of Birmingham) moreover employed the calabar bean in a case of strychnia poisoning: the patient recovered. (2), Observations on cases of poisoning of the human subject by the physostigma confirm the results of experiment. Dr. Cameron(1) relates the details of what may be considered as an experiment on the human being on a large scale, in a report of the cases of forty-six individuals (mostly children) who accidentally, at the same time, in Liverpool, had eaten, and suffered from the poisonous effects of the bean. In these cases the most prominent and persistent symptom was loss of muscular power. (3), Statistics on the subject of the administration of the calabar bean in tetanus, collected by Dr. Eben Watson,(2) are highly encouraging; he records *ten* recoveries out of eighteen cases of its exhibition, a scale of mortality contrasting most favourable with the customary death-rate in tetanus. M. Giraldés(3) also has reported favourably of the employment of the drug for tetanus in France; and Novarro(4) has reported seventeen cases of its employment, with *twelve* recoveries. (4), I had personally, from experience, lost faith in any other forms of specific treatment for tetanus which I have, or have seen, adopted. (5), In a case so desperate as is one of acute traumatic tetanus, where a desperate remedy, if any, must be resorted to with hopes of success, it is always legitimate to act on the old maxim of *anceps remedium melius est quam nullum.*

To be effectual, or to produce any effect, indeed, at all, in tetanus, it is quite obvious that (as Dr. Hobart has remarked)(5) the physostigma must be administered in much larger doses than we will find given in ordinary handbooks on therapeutics as the average quantity. Perhaps this fact comes as a part of the remarkable toleration for large doses of most narcotics which characterizes this disease.

Amongst experimentalists there exists some difference of opinion as to the precise mode in which calabar bean causes death. As Dr. Fraser (6) has pointed out, there appears to be little doubt that when given in large and rapidly fatal quantities it may kill by paralyzing the heart in diastole; and the *post mortem* condition of the heart in the instance of the only fatality amongst Dr. Cameron's cases indicated that death (which took place in an hour and a quarter after eating several beans) had taken place in this manner. When given in more moderate quantities, however, death—if it result—would appear to approach by means of the paralyzing influence of the drug upon the respiratory apparatus, its effect probably gradually invading the higher regions of the cord and the medulla oblongata. This appears from the experiments of Dr. Harley,(1) as well as from those originally made by Dr. Fraser. As this latter is, of course, the only way in which risk could be entailed in its employment therapeutically, it would follow that during the administration careful observation of the act of respiration should be our chief guide; the very fact, too, of the existence of the greater or less embarrassment to respiration which more or less belongs to tetanus will form an additional reason for a careful watching of this function. The effect on the pupil produced by the internal administration of the bean being transitory and uncertain, and not, indeed, undisputed(2)—though it should be attentively observed—does not afford so valuable an indication.

(1) *Medical Times and Gazette*, 1864, Vol. II.: p. 406.
(2) *The Practitioner*, Sept. 1869.
(3) *Comptes Rendus de. l'Acad. des Sc.*, 1863.
(4) *Etude Sur la fève de Calabar. These.* 1869.
l.c.: p. 248.
l.c.: p. 328.

Case.—On the 26th of January last, a strong, and previously healthy, skilled tradesman, of the age of 30, standing on a scaffold elevated about twenty feet above the ground, was employed upon a block of marble of about eight tons in weight, which was being hoisted up by some machinery. The chain to which this heavy block was attached became "kinked," and slipped, and from the resulting shock hoisting apparatus, block, and scaffold were all precipitated to the ground. The patient was violently jerked off, falling, however, clear of the apparatus.

The patient was immediately admitted to Sir Patrick Dun's Hospital. On examination he was found to have sustained three injuries:—(1), a scalp wound, slight and insignificant; (2), a comminuted fracture of the middle of the left forearm; and (3), a compound fracture of the right humerus, about an inch above the condyles: a transverse linear wound, about one inch and a-half in length, existed on the posterior aspect of the arm, at the site of this latter fracture, through which the lower extremity of the upper fragment of the humerus protruded; the periosteum was observed to be stripped up from off the protruding fragment for a considerable distance; the lower fragment, with the forearm, was displaced forwards, and drawn slightly upwards. The amount of hæmorrhage was small.

The scalp wound was dressed simply; and the fractured forearm put up with an anterior and posterior splint. The wound of the arm, having been washed out with a lotion of carbolic acid by means of a syringe, was dressed antiseptically with eight folds of carbolized gauze, the whole

(1) *Med. Times and Gaz.*, 1863, Vol. I.: p. 651. Also consult Bezolt and Goetz in *Centralblatt*, 1867: p. 241.
(2) Anstie on *Stimulants and Narcotics*, 1864: p. 481.

being done under a spray of carbolic acid lotion. Slight extension and manipulation succeeded in reducing the displaced bones, and the arm was put up in a hollowed angular tin splint running along the posterior aspect of the arm and forearm.

January 28th.—The arm was re-dressed, as some discharge commenced to show itself. There was slight swelling of the arm and forearm; the wound gaped somewhat, disclosing some slight sloughing of the tissues; there was an insignificant discharge of sero-sanguineous character. The bones remained in good position.

The re-dressing was conducted as before under a spray of carbolic lotion, and the carbolized gauze used. The posterior splint was, for convenience of dressing, replaced by a flat rectangular wooden one placed along the inside of the limb, with the forearm slightly pronated. There was scarcely any constitutional disturbance: Pulse 84; temp. 99°.

February 1st.—The arm has since been daily re-dressed in the same manner. A free discharge of healthy pus, entirely devoid of any fetor, has become established from the wound. During the last couple of days the forearm and hand had gradually become swollen and œdematous; and to-day fluctuation was observed over the posterior aspect of the upper part of the forearm, an abscess having formed in this situation and extending towards the outer condyle. This abscess was evacuated, giving exit to some ounces of healthy pus. There was no communication between this abscess and the fracture or the external wound. The constitutional disturbance was still remarkably and unusually slight.

4th.—The wound dressed daily, as before. The wound, and the abscess opened on the 1st, discharging healthy pus slightly. To-day the patient exhibited a slight attack of facial erysipelas. He had a mild attack of sickness of stomach, and some headache last evening, and to-day the forehead and cheeks were occupied with three or four erratic erysipelatous patches, scarcely at all painful. These patches had no local connection with the scalp wound, and the wound of the arm was perfectly free from any trace of erysipelas. Dressed the wounds as before antiseptically. The splints on the left forearm had to be readjusted, some difficulty presenting itself in preventing bowing outwards of the radius, in consequence probably of the comminution of the ulna.

7th.—The attack of facial erysipelas subsided readily without giving much trouble or spreading to any extent; it retained its original superficial character of a few not very swollen, red, erratic patches. It was never accompanied with sufficient swelling to cause the closure of the eyelids; and the surface had to-day commenced to desquamate. To-day a slight degree of swelling, and redness existed over the upper and outer aspect of the arm, unconnected, however, with the original wound. The wound has been progressing favourably towards healing, with very little discharge; only necessitating dressing every second day. The dressings have always been conducted under a spray of carbolic acid lotion.

11th.—Opened to-day a large abscess, which had formed at the site of swelling of the arm: otherwise the patient appeared to progress most favourably, with little or no constitutional disturbance.

13th (19th day).—On visiting the patient to-day, his aspect was observed to be peculiar—as if slightly frowning; and he had slight, but decided, trismus; he complained of sore throat, and tickling cough; he had not slept last night, and had sweated profusely. During the rest of this day, the trismus became more pronounced; and he had occasional muscular twitchings and thrills through the body generally; but nothing approaching to a general convulsive spasm, and no attempt at opisthotonos. There was some stiffness of the muscles of the back of the neck, and of the abdomen; but all other parts were quite flaccid. Pulse 100. Ordered, a full chloral draught at night, in case he did not sleep; and a purgative—the bowels being much confined.

14th (20th day).—Had no sleep, although two full chloral draughts were administered. To-day he was very restless and irritable; the trismus almost complete; he has repeatedly suffered from universal muscular spasms, not very severe, but causing some degree of pain, which he refers chiefly to the lower region of the abdomen at the insertion of the recti muscles; the tetanic aspect of countenance decidedly marked; he lies on the back in bed with the legs fully extended, and thighs slightly tense. On removing him from one bed to another this morning he had a slight opisthotonic spasm.

Vespere.—Was summoned to visit the patient, whom I found suffering much from continual muscular spasms about the throat, producing great difficulty of, and disinclination to, swallowing. He sweated constantly and very profusely; and was much troubled by the accumulation of mucus in the bronchi and trachea, which was very tenacious, and was expectorated with great difficulty. Tetanic physiognomy well marked: the head rigid, and thrown back. The muscles of the abdomen were all very tense, and tender. Pulse 116–120; temp. 101°.

This evening the administration of the calabar bean was commenced, beginning with doses of one-sixth of a grain of the extract every two hours.

16th (21st day).—Slept a few hours last night, after getting four doses of the extract. The pupils this morning quite unaffected. He has still much the same severity of general symp-

toms; pulse 120; temp. 100°·4; sweating continually; he complains of wearying, though not very severe, pain of the lower part of the abdomen; the respiration is slightly laboured, and impeded by accumulation of mucus and irritative cough. He has had no regular general convulsive spasm; the clonic muscular affection in the present instance amounting at most to an occasional general tension and quivering of the whole body, producing neither opisthotonos nor emprosthotonos, but a mere straightening and violent extension of the body and limbs, *i.e.*, that form of tetanic convulsion (I take it) to which the term *tetanus erectus* used to be applied by the older writers. To-day, the dose of the extract of physostigma was increased to one-third of a grain, given every hour.

17*th* (22*nd day*).—Slept very little. This morning, the pupils appeared to be slightly contracted. The muscular system much in the same state, viz:—There is a marked condition of tonic spasm of the muscles of the back of the neck, pectoral region, and most markedly of the abdomen; and every half hour or so—as an approximate average—a moderate and transitory clonic general spasm, producing the extended attitude referred to above under the title "tetanus erectus." Still some difficulty of swallowing; and some (but not so great) embarrassment of respiration. Pulse 120; temp. 101°·1. The patient takes freely, and bears well, a fair amount of nourishment and stimulants. The dose of the extract was increased to-day to one-half of a grain, given every hour; the condition of the pupil, of the respiration, and of the heart being carefully watched and attended to.

18*th* (23*rd day*).—The pupils are well contracted. Nevertheless, the tetanic symptoms appear to progress unchecked;—there is more tonic spastic contraction of the muscular system; more frequent and severe clonic spasms, which are excited by any small irritation,—the touch of a cold hand, &c. It has been found necessary to guard the tongue by a piece of leather interposed as a plug between the teeth, notwithstanding which he has bitten it once or twice. He has got occasional very brief snatches of sleep, during which the jaw falls, and the mouth opens for a considerable extent to become closed with an audible click when he is aroused by a fresh spasm. The dysphagia, pain and tenderness of abdominal muscles, and irritative cough all persist. Pulse 116; temp. 101°·2.

Vespere.—This evening he became rather suddenly considerably worse, the spasms—never of any very great severity—becoming much more frequent, and accompanied with greater pain, being generally ushered in by a slight groan. As the patient appeared to be likely to become rapidly worn out from want of sleep, I made him slowly and carefully inhale the vapour of chloroform. The relief given was marked and instantaneous, but as transitory as the influence of the vapour itself; an immediate recurrence of painful spasms taking place as that influence passed off. A very few repeated inhalations were, however, sufficient to cause him to pass rapidly into a stertorous slumber. Mr. W. J. Pim (Resident Pupil), with great humaneness, kept up this benign influence at intervals, all the night; the relief thus given, though very great for the time being, was never more permanent than was the narcotic effect of the chloroform directly.

During this same period the calabar bean was continued, at the rate of a grain every hour; which was increased to one grain and a-half. This quantity appeared to be sufficient to maintain a slight but decided contraction of the pupil, without in the slightest interfering with the respiration, or heart's action. His muscular system, however, appeared to remain unaffected:—the spastic contraction, and the frequent muscular spasms had become, the one more marked, and the other more frequent during the the administration; and his general muscular strength seemed to be wonderfully preserved, judged by the efficiency with which—even obstructed as he was by the constant spasms—he could exert himself to assist himself in bed.

19*th* (24*th day*).—The bowels were moved naturally this morning. He appeared to be much weaker, however; he suffered less than before from cough, or difficulty of swallowing: sweating was very profuse. The spasms were almost constant, except when under the influence of chloroform, which was kept up continuously. Pulse 120, small and weak; temp. 102°. The pupils were still kept moderately contracted under the influence of the bean, which was given in doses of two grains every two hours. The patient sank and died towards the evening, of this—the twenty-fourth—day after the injury, and the seventh after the appearance of the first tetanic symptom. He died of simple asthenia. Immediately after death, the pupils, which had been contracted, became widely dilated.

Remarks on the Preceding Case.—I wish to refer here only to such particulars of this case as bear upon the value and administration of the calabar bean. From this point of view, I venture to consider the case as one of some importance, firstly, because of the very full and persistent trial given to this medicament; and secondly, because the drug was given without any complication of other medicinal combinations, which might obscure its action; so that whatever effect—if any—our interference may be conceived to have produced can be attributed solely to it; for the transitory influence of the chloroform inhalation cannot, from the circumstances of the case, and from the details given above, be con-

sidered (I think) to have interfered materially with the action of the bean.

In reference to the possible action of any medicine administered during the progress of a disease, the proving of the reality or not of its beneficial effect is a matter which partakes often of the notorious difficulty of proving a negative proposition; and so it is here. It is impossible, that is to say, to pronounce whether the disease in this case might not have run a more rapid or a more severe course if the administration of the calabar bean had been omitted.

Contrasting the details of the present case with those of a typical case of tetanus, we might remark that the clonic convulsions which occurred in it were singularly mild in severity of character; but then their frequency of repetition was very great, and even increased during the administration of the physostigma. This relative mildness of the general convulsive spasms indeed forms almost the only particular in which I would look upon the case as presenting anything special in reference to the muscular system. Could this be attributed at all to the influence of the drug? At the same time, however, the trismus was complete; the general tonic tension of the muscles as well, and as universally developed as we usually find it; and even up to the day of the patient's death I failed to detect the least trace of that muscular relaxation and prostration which is one of the desired effects and manifestations of the bean.

It can scarcely be pretended, nevertheless, that the absence of all effect of this kind upon the muscular system was due to an insufficient employment of the drug; which was, I think, pushed as far as could be judicious or safe; and indicated the accomplishment of its physiological effect upon the system, by the permanently contracted pupil.

As far then as the evidence of this individual case goes, it is quite confirmatory of the doctrine that it is only in those cases of tetanus of a more or less subacute or chronic character that much can be hoped for from the calabar bean; and as these belong to just that class of cases in which a knowledge of the natural course of the disease tells us that recovery occasionally spontaneously occurs, to draw any conclusion as to the positive therapeutical value of the remedy becomes a matter of very doubtful logic;—an assertion which, indeed, may with perhaps equal truth be made in reference to any of the other vaunted specifics for traumatic tetanus:—they have all alike in fact only, as a rule, proved successful in cases of such a kind that it is impossible to feel assured that spontaneous cure might not have resulted without them.

In the present case, it was encouraging to find that the free administration of the physostigma was not at any period attended with any symptoms of failure of, or disturbance of, the cardiac or respiratory functions.

The immediate return of the pupil to a widely dilated condition after death is quite in accordance with the results observed in animals killed while under the influence of the experimental administration of the calabar bean.

Original Lectures.

THE WAR OF THE DOCTORS, SURGEONS, AND BARBERS OF PARIS IN THE SEVENTEENTH CENTURY.(*)

By the Rev. J. W. BARLOW, F.T.C.D.,
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In the year 1577, the compact of 1505 between the doctors and barbers was again confirmed; but the time was fast approaching when the harmony between these strangely assorted companions was about to be disturbed.

At this time, Ambrose Paré (1509-1590), the father of modern surgery, was at the height of his fame. Paré commenced his career as a barber; he afterwards went to Italy with the French army, and there gained so much reputation that he was appointed surgeon to Henry II. in 1552. So it came to pass that although he was a member of the College of Surgeons in 1577, his connection with that college was only of an honorary character, and his personal feelings leant towards his old friends and teachers who formed the corporation of barbers.

It is not at all unlikely that the prestige attaching to the name of their ancient comrade, may have been one exciting cause of the advanced pretensions of the barbers; but, however that may be, certain it is that, about this time, these humble companions of the soap-dish and razor, took it into their heads to make asses of themselves by imitating the most absurd of the customs of the medical faculty—the disputations in the schools, of which I gave an account in my last lecture. The poor barbers seem to have been imposed upon by the doctors. It is not easy to imagine the medical faculty condescending to joke, but they certainly *did*, in a sort of derisive manner, and probably with the benign intention of exasperating the surgeons, grant permission to the barbers to imitate these ceremonies. But the *theses* were designedly ridiculous. "Theses barbitonsorum chirurgorum quam brevissimæ sint, et tribus parvis articulis comprehensæ." Nevertheless, the barbers took the matter in sober seriousness, and insisted on their right of disputing as copiously as their masters, on the subjects which belonged to their own branch of the profession.

Here was the first open split between the doctors and barbers; but the fact was simply that these latter had, with respect to knowledge

* *Concluded from page* 169.

of practical anatomy, the advantage of their teachers. For this discreditable fact the doctors had only to thank their own stupid prejudice on the subject of manual work. It had been found necessary, more than once, to confine within narrow limits in the school, the function of the actual dissector. No one could doubt how the reputation of the professor in the eyes of the students would be affected if some elaborate theory, explaining a physiological fact by a definite organism, was shown by an abominable barber to be based on the peculiar liveliness of the professor's imagination. A stringent decree was added to the statutes, "Doctor non sinat dissectorem divagari sed contineat in officio dissecandi."

But the barbers were premature in rebelliously asserting their rights of disputation. The quarrel was brought before Parliament, and, in 1593, an edict of the Court sternly recalled the barbers to their duties as defined by the edict of Charles V., to which I have already referred. For several years this edict was rigidly observed; and we find, in 1607, one of the doctors condemned in a heavy penalty, for having delivered to the barbers a lecture on respiration, that being a scientific matter, about which no barber had any business to concern himself.

The doctors had indeed come out triumphant, but they had received a great shock. Confidence between them and their humble (or formerly humble) companions had vanished for ever; and their position was now analogous to that in which the surgeons had found themselves placed just before the secession of their former assistants to the medical faculty. The mere fact that the barbers were not completely crushed by the decree of 1593 is of itself sufficient to show that they had managed to establish themselves on a secure foundation, and had really become a formidable power. Things were certainly going from bad to worse in the medical school, so far as the relations between the teachers and the assistants were concerned.

Here, then, was the state of the three rival corporations at the accession of Louis XIV. First came the Medical Faculty, an immovable petrifaction, demanding respect and obedience from the two others, but receiving neither respect nor obedience. Next, the College of Surgeons, the members of which occupied an intermediate position between a scientific society and the commercial municipality; keeping shops, like other traders; but holding examinations and conferring degrees, though always under vigorous protest from the corporation of doctors. Lastly, the Tonsores Chirurgici, who had by this time acquired a prescriptive right of practising in every department of surgery, and even, to some extent, in medicine. These three bodies mutually abhorred each other with an intensity which can only be equalled by members of different religious denominations at the present day. But there was a cause in existence, which, before long, brought into a forced union the members of the two surgical corporations, in order to make a stand against their common medical enemy.

This cause was the difficulty of obtaining subjects for dissection. I have already described the frightful scenes which frequently took place on the Place de Grève and in the streets of Paris on the occasion of an execution. The cause of these disturbances was the fact that the dean of the medical faculty had an undoubted right in law to the bodies of all executed criminals; and the police officer in charge was expressly forbidden to deliver any such bodies to anyone who did not come armed with a written order from the aforesaid dean.

I cannot, indeed, help thinking that, although the bodies of criminals were the only *lawful* subjects, a great deal of surreptitious dissection went on in the Hospitals. A passage in Ambrose Paré's works seems to show this decisively. Speaking of the inestimable advantages he derived from his three years' residence in the Hotel Dieu, he observes that he had there an opportunity of learning "on an infinity of dead bodies" all that concerns anatomy. It is plain that it was not by merely inspecting the outsides of this infinity of bodies he acquired so much anatomical knowledge.

Still the legal restriction was painfully felt; and the fact that the College of Surgeons was sometimes obliged to illustrate the operation of trepanning with the help of a calf's head, may remind us of Mr. Bob Sawyers' well-known performance with a quartern-loaf and an oyster-knife. No wonder that the competition for subjects was so keen as to issue in formidable riots, and that we find a standing order prohibiting all students in surgery from coming to lecture with swords or sticks of any dimensions. On one occasion the surgeons having carried the scaffold by storm and secured a subject, the dean of the medical body sent their beadle to demand the prize; but the unlucky man was almost reduced to a subject for dissection himself, and, the police being called in, the surgical students actually divided the body into fragments rather than let it fall into the hands of their hated enemies.

It is plain that so disgraceful a state of affairs could not be recognized as permanent. But the question was—How can it be terminated?

> "Quid si prisca redit Venus,
> Diductosque jugo cogit aheneo?"—

The surgeons and barbers must return to their old alliance. All that had passed on both sides since the fatal 1505, must be mutually forgotten and forgiven. But it was not without many a

pang the surgeons found themselves compelled to amalgamate with their ignoble rivals; and Quesnay relates the transaction in a mournful, and, as it were, apologetic tone. "The utmost severity of the laws was powerlesss to curb the barbers; their enormous multitude swallowed up, ruined, disgraced the surgical profession. To struggle against the torrent was useless; the two corporations were amalgamated; the surgeons became burdened with the disgraceful association with barbers; the barbers entered upon all the rights and privileges of the surgeons." Such is Quesnay's account. This memorable compact was signed in 1655, and, in the following year, the parliament wearied with this eternal warfare, formally ratified the union. They believed, no doubt, that this amalgamation would cut up by the roots the sources of war, but the end had not come yet.

We can easily imagine the fury with which the Medical Corporation must have witnessed this formal rebellion of the barbers. The artisans, raised and trained by themselves, passed over with arms and baggage to the enemy. The machine, created by themselves, was now turned to their own destruction.

But all was not yet over with the doctors. We know that in logic the conclusion always follows the weaker part. Might not something analogous hold good in the surgical profession? Might it not happen that this new amalgamation of the surgeons and barbers would have, as its legal effect, not the emancipation of the latter, but the enslavement of the former? It was an extremely nice point; and, if the doctors could only get it decided in their own favour, it would be hard indeed to conceive a result more absolutely delicious. To see the treacherous surgeons, in recompense of their unhallowed practices with the rebellious and ungrateful barbers, finding that they had in reality bound themselves to the annual oath of allegiance—the quit rents—the manifold tokens of subjection, to all of which the barbers were legally liable! This was obviously a favourable opportunity for bringing once more before the parliament their perpetual pretensions to absolute supremacy in all matters relating to either medicine or surgery. No time was lost in commencing proceedings. The faculty made a formal demand that either the decree uniting the two corporations should be annulled, or that the obligations to which the barbers had been rendered liable by former contracts, should be forthwith extended to the surgeons; and that the faculty should have the further right to impose on both barbers and surgeons, at pleasure, such new statutes as they, in their wisdom, should judge to be convenient and for the public good. They also renewed their ceaseless claim that the surgeons should be altogether prohibited from lecturing, disputing, conferring degrees, and above all from assuming the academic robe and cap.

This memorable lawsuit commenced Feb. 1st, 1657, and lasted till Feb. 7th, 1660; more than three years of incessant abuse and disgraceful exhibitions of rancorous malignity. The university sided with the faculty, and the Rector himself favoured the Parliament with a Latin harangue which lasted till midnight. But the counsel who appeared specially for the doctors made very short work of the whole case for the surgeons. "It is clear," said he, "that as the rational soul includes the sensitive and the vegetative, so medicine includes both surgery and pharmacy; and, as it is plain that the rational soul has the pre-eminence over both the others, so is the medical faculty supreme mistress of the other departments of the science of healing. *Sic volo sic jubeo* should be the only explanation of any rule imposed by the faculty on their inferiors."

But no circumstance worked so strongly to bring about the ruin of the surgeons, as their own internal divisions. The decree amalgamating their corporation with that of the barbers, had not been passed without vigorous opposition; a formidable minority resisted to the last the discreditable union, and during the litigation proved themselves the most dangerous enemies of their college. This rancorous little band was represented by a special advocate, who did more mischief to the surgeons than all the other lawyers put together. He was the man who brought before the judges all the petty intrigues and dissensions in the College, which the surgeons would gladly have suppressed, but which his malignant clients had every opportunity of inserting in his brief. Omer Talon also, the advocate-general, who played so prominent a part in the troubles of the Fronde, took part with the doctors. Although he admitted the merits of the surgeons, and gave them full credit for their good service in the cause of science, he concluded his speech with the formidable dilemma: —"We must either annul the recent compact between the two corporations, and hand over the barbers, as runaway slaves, to the medical faculty; or the two corporations, united into one, must remain in subjection to the faculty, in conformity with the decree of 1577."

The lawsuit terminated with a crushing decree against the surgeons. If the doctors themselves had dictated the sentence, it could not have been more truculent. The surgeons were prostrated; their beloved caps and gowns were taken from them; they might hold no more disputations. No more bachelors and licentiates, but only "aspirants" were to be manufactured by them. "The two communities of surgeons and barbers, united into one, shall remain in permanent subjection to the medical faculty, in accordance with the compact of 1577."

The doctors went nearly wild. Seventy of them, dressed with extraordinary gorgeousness, marched in solemn procession to the President of the Parliament, to render thanks for the decree. But they did still more for Omer Talon. To him also went a procession—a procession, moreover, carrying choice and rare gifts—a magnificent edition of Hippocrates, in five folio volumes splendidly bound, and beside the Hippocrates a silver box. Inside the box, written on vellum, and sealed with the great seal of the faculty, was a new decree; and by this decree the faculty aforesaid bound themselves and their successors to all eternity to doctor, gratuitously, Omer Talon himself and all his descendants, described in it as "illustrissima Taloniæ gens."

But the surgeons were stunned. For several days not one of them appeared in the streets. Six of them took to their beds. When they began to recover themselves a little, a feeble attempt was made to get rid of the disastrous compact with the barbers; but it was too late. Had this new question come before parliament, we could scarcely over-estimate the bliss of the doctors, calmly looking on at the fierce civil war of their old antagonists. "They will eat each other," said the spiteful Guy Patin, "and they'll be no great loss." But human felicity is limited, and this last gratification was denied the doctors. The surgeons were aware that their defeat was final. Before the year was out they had to remove from its place the material emblem of their former greatness—the chair of Ambrose Paré. They took the oath of allegiance; they paid their yearly quit-rent. No element of humiliation was spared them. See how the Præses in the concluding burlesque of the Malade Imaginaire (1673) classes them with the apothecaries as the humble servants of the doctors:—

"Et vos, alteri messiores,
Sententiarum facultatis
Fideles executores,
Chirurgiani et apothecarii."

The conduct of the faculty throughout the whole of this deplorable business, was not such as to entitle them to the grateful remembrance of posterity. From a selfish regard for their own class interests, and for miserable questions of precedence, they did what they could to debase and destroy the surgical profession; and to retard the progress of an art which is of all arts the most beneficial to humanity. The surgeons did not recover from the degrading position in which the decree of 1660 placed them, till (nearly a century later) the Royal Academy of Surgery was founded by Louis XV.—an institution which would most likely have extinguished the old faculty, had not the Revolution, by extinguishing both of them, saved it the trouble.

I cannot leave this history without calling your attention to an important practical lesson which may be deduced from it. We may here learn the fate which is likely to overtake a scientific or literary institution when amalgamated with another of inferior grade. Considered in this point of view, the decree of 1660 may have no small interest for ourselves. Such alliances degrade the higher institution to the level of the lower; and this was, rightly enough, the decision of the parliament of Paris. Now, as we all know, we have ourselves but recently escaped a similar fate. Had the University Bill of Mr. Gladstone become law, we should, by this time, have found ourselves amalgamated with a swarm of incompetent provincial academies; and the union would, without doubt, have furnished no exception to the general law that "nothing is stronger than its weakest part."

ON STONE IN THE BLADDER.*

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Member of the Surgical Court of Examiners, R.C.S.I.

LECTURE II.

With regard to operation:—In the case of a child we have no choice. All surgeons are agreed that lateral lithotomy is the operation suitable for a child. If the patient is an adult we may consider whether we will crush the stone or adopt lithotomy. Lithotomy and lithotrity are not rival operations. I do not coincide with the idea that they are, more than I can agree in the opinion that excision of the knee joint is a rival to amputation of the thigh. It is the duty of surgeons to select the operation suitable to each case. You must get the patient into as good a state of health as possible. If suffering from much irritability of the bladder, you should order tepid baths and lime water or Kali water to correct the acid state of the urine, and keep the patient in bed to prevent the stone falling on the sensitive part of the bladder.

With regard to the anatomy of the bladder I must refer you to the class books. When you have an opportunity of dissecting the bladder of a child and the perineum, it is very important to do so. The bladder in a child is not a pelvic viscus: it lies in the abdomen. A man's bladder lies in the pelvis.

Having decided on cutting for the stone, the instruments and appliances required are extremely few. I do not intend to embarrass you by showing you many instruments, because the simpler the operation the better. The time was when the table was covered over with instruments; now they are all in that little box which you might carry in your pocket. I believe that one

* *Concluded from page 150.*

of the causes of failures in lithotomy has been not making the operating table the height that you see this is. I do not know any book on surgery (except Mr. Butcher's work "On Operative and Preservative Surgery)," which states the height that the table should be. The class books say "a table of convenient height." Some surgeons sit down on a chair while operating; others stand; in Dublin the rule is to kneel on one knee, and the table must be arranged accordingly. A table of this height would not do for all operations. I have arranged this table 3½ feet high, and you saw me perform Lateral Lithotomy on it a few mornings ago.

There are two methods of tying the patient: by tapes and by Pritchard's anklets. Sir Henry Thompson prefers the anklets. I tied the Hospital porter on this table with the anklets and afterwards with tapes, and asked him which he would easier get out of. He said, "out of the anklets;" and as the patient has more freedom in them I prefer the tapes. The night before operation the patient should get a dessert or teaspoonful of castor oil, and in the morning the rectum should be washed out with water, and thus made empty. This staff is suitable for a child of 5 years; it is number 7. I have operated with it on more than one occasion. The larger the staff is the easier it is to get safely into the groove. The sound for a child is number 3. If I were to sound a child with a large instrument it would be so tightly grasped that it could not be turned round easily. The operator is responsible for the staff being in the bladder: he should pass the instrument *himself* and strike the stone. I shall now show you how to secure the patient with the tapes, and also with the anklets. The assistant who holds the staff should be of good height: he places his arm thus over the patient's knee. The patient is to be held firmly by two assistants. The staff should be hitched well up under the pubes. An inexperienced person would suppose that the more he brought the staff down the easier for the operator, but it is the reverse. Raising the staff means raising the urethra away from the rectum, a very important point to remember. The assistant who holds the staff is to do nothing else, for if he stoops to look at the operation his hand becomes depressed, and the staff is liable to slip out of the bladder, or goes out of the urethra altogether. I have here a staff grooved in the centre and another on its side, which is known as Sir William Ferguson's staff. It must be full sized and have a good deep groove. After tying the patient, Liston says that the first step and the last should be introducing the finger into the rectum. All surgeons say introduce the forefinger, but I always keep my forefinger free from fæces, and I introduce the *second* into the rectum, which answers every purpose. The forefinger nail must be long and strong.

You commence your incision one inch in front of the anus. You will find one surgeon saying 1½ inch, another 1¾, and a third only ¾, but you will find one inch in front of the anus is the best rule. Let it begin an inch in front of the anus and terminate an inch below the level of the line extending from the tuberosity of the ischium to the anus. This knife you see has a short blade with long handle and a broadish belly. Having felt the tuberosity of the ischium at each side, feel for the staff in the middle line; then take your knife and make your incision, cutting through the skin, dartos, fascia, fat, and fibres of superficial sphincter and some branches of the external hæmorrhoidal vessels. Having made that incision sufficiently deep, feel for the groove in the staff with your forefinger. Having got your finger nail *fixed* into the groove of the staff, you next sink your knife into the groove and wriggle it; do not mind breaking its point, but be careful that your knife is *in* the groove of the staff and *not on its edge.*

A perfect knowledge of anatomy is particularly requisite in the lithotomist. You should accurately know the anatomy of the perineum; and the chief point in operating is to get in *behind the bulb,* and hence the importance of not beginning your incision too high up. If you cut low down you get in your knife *behind* the bulb, into the membranous portion of the urethra; you run your knife along the groove of the staff, and when it comes to a stop it cannot be anywhere but in the bladder.

Nearly every lithotomist in Dublin whom I have seen performing the operation used the probe-pointed lithotomy knife, which is for the purpose of enlarging the neck of the bladder. I have always felt, in cutting for stone, that when I got into the groove of the staff and had my knife in it, and had the membranous urethra and prostatic urethra cut, I considered it unnecessary to put down the knife then and take up another. But if the stone is too large to come out through the wound which has been made, it is the surgeon's duty to introduce on his finger the probe-pointed knife, and enlarge the wound in the neck of the bladder; for, recollect, lithotomy means *cutting* out the stone *not tearing* it out.

Your first incision extends from an inch in front of the anus down midway between the tuberosity of the ischium and the anus, and the second incision (which is shorter) divides the membranous portion of the urethra—portion of prostrate gland, and inch of the bladder—the knife being held as I now show you, with the proper direction of its blade. When your knife enters the bladder a little urine trickles out, and as your finger passes in a gush of urine comes out. The staff being withdrawn you then take up an instrument which some surgeons do not approve of—the blunt gorget—and you introduce it along

your finger; the stone sometimes gets into its groove and rolls on the floor. The forceps is passed in on the gorget, the latter is then withdrawn, and you grasp the stone.

When taking the knife *out* of the bladder after lithotomy there is *more danger* than in putting it in. You should keep the back of the knife pressed up into the groove of the staff.

The last step in the operation is introducing your finger into the rectum again, to ascertain that it is not wounded. If, however, you should wound the rectum, you ought not be blamed very much, especially if the patient is an adult; no ill consequences follow as a rule, but there is no excuse whatever for tearing a stone out through the wound and thus rendering sloughing liable. In fact, in this stage of the operation, *festina lentè* should be ringing in the surgeon's ears.

You should next sponge the wound, untie the patient, and introduce the cannule à chemise. This appliance is made by cutting a piece out of a fine cambric handkerchief, tying it around the end of a silver cannula, and securing it with fine silk, so as to resemble an umbrella. This you roll up, pass into the wound, and with charpie plug the inside of the folds, by which means the urine will trickle through the cannula only. You will then put a bandage round the pelvis, tie one tape in front and the other behind, and fasten both.

I like the cannule à chemise, for if there is hæmorrhage after lithotomy we have no way of arresting it so readily as by this appliance. It may remain in from forty-eight to seventy-two hours. The patient's bed should be prepared with a Mackintosh under his hips and a hot flannel laid across his abdomen, and he should get an opiate draught in proportion to his age, a hot jar to feet, and under his hips a cross or draw-sheet. For the first hour or two the sheet will be wet from urine and a little blood. What you should like to see is a sheet wet from clear urine, which comes from the cannula clearer and clearer, so that at the end of a few hours nothing but clear urine passes. If there is no hæmorrhage the case, as a rule, does well. If there has been a difficulty in getting into the bladder or getting out the stone, or if there is much hæmorrhage, the case will not as a rule be successful.

With regard to after treatment you should give an opiate draught occasionally to procure sleep, and order light nutritious diet, as chicken broth or beef tea, and easily digested food.

Cod-Liver Oil.—This remedy is rarely objected to if the patient temporarily obliterates the sense of taste by a mouthful of spirits or spice, and then takes the oil between two layers of porter, ale, coffee, etc., holding the nose meanwhile and not releasing it until the mouth has been thoroughly rinsed and a "peppermint" inserted.—*Boston Med. and Surg. Jour.*

Progress of the Medical Sciences.

REPORT IN OPHTHALMOLOGY.

By H. R. SWANZY, A.M., M.B., F.R.C.S.I.,

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Tatooing of the Cornea.—Since Wecker(1) introduced(2) Tatooing for cases of Leucoma of the Cornea, the operation has found an established place in ophthalmic surgery. At first Wecker believed that tatooing of the cornea could only be employed to obtain most satisfactory cosmetic results; but he afterwards(3) found it to be of another use, as did, also, C. Bell Taylor, of Nottingham.(4) By applying the method to semi-transparent opacities, so as to make them quite impervious to light, and combining this with an artificial pupil, *the vision* in such cases was remarkably improved. Wecker thinks, that the suppression of the diffusion of light through the semi-opaque tissue acts here as a stenopæic apparatus. A grooved needle, containing the pigment to be used, was the instrument employed in the beginning. Bader(5) and Taylor(6) recommend several (2 to 4) rather coarse sewing needles, held closely together in a handle. The colouring matter being laid on the leucoma with a fine brush or small spatula, a great number of punctures are then made with the multiple needle. This mode, being much more rapid, is a very great improvement upon the original one. The only colouring matter at first used was Indian ink. For opacities lying towards the periphery of the cornea, several surgeons (Woinow(7), Rava(8), C. Bell Taylor), suggested the employment of other colours than black, and various substances were tried by them. Rava and Taylor used water-colours corresponding to the shade of the iris. Woinow made use of cinnabar and Berlin blue. If the iris be grey, a moderate application of Indian ink to the leucoma will produce the desired effect. In order to determine more positively which colouring matters admit of being fixed in the cornea, Brittin Archer(9) undertook a number of experiments in the laboratory of Professor Donders, at Utrecht. The healthy cornea of rabbits was the field of experiment, and the substances experimented with, besides Indian ink, were Berlin blue, ultramarine, indigo, Sienna brown, and gamboge. Archer first tatooed the cornea of a large rabbit in six different places with the six different colours. With each colour 200 punctures were made. Next day there was a conjunctivitis, which disappeared again after two days. Five days after the operation the immediate neighbourhood of the tatooed places became cloudy, and on the eighth day an acute keratitis was fully developed, which led to ulceration of the superficial layers of the cornea at these places. After the inflammation had subsided, it was found that Sienna and ultramarine were the only substances which had remained. The ulceration, and consequent loss of substance, had been most extensive at the places where gamboge was employed, the cornea there being reduced to one-half its normal thickness.

(1) Tatouage de la Cornée. *Union Médicale.* Mars, 1870.

(2) According to Anagnostakis (*Contributions à l'historie de la chir. oculist. chez les anciens.* Athènes, 1872), a form of tatooing of leucomata was practised in the time of Galen.

(3) *Archives of Ophthal. and Otol.*, Vol. II., No. 2: p. 224.

(4) *Brit. Med. Journ.*, 7th Sept., 1872.

(5) *Med. Times and Gazette*, Vol. XLIV.: p. 294; and *Lancet*, I., 1872: p. 610.

(6) *Loc. cit.*

(7) *Sitzungber. d. ges. russischer Aerzte in Moskau.* No. 13. *Jahresbericht der Ophthalmologie für.* 1872.

(8) Del Tatuaggio della Cornea: Sassari. Tip. Azuni. *Jahresber. d. Ophthal. für.* 1872.

(9) A. v. Graefe's, A. f. O., XX. Abth. I: p. 225.

Archer then tatooed a number of corneæ, each with one of the substances only. Ultramarine, Sienna, and Indian ink produced but little inflammatory re-action, and the colouring remained as intense three weeks after the operation as on the day it was done. Indigo and Berlin blue caused rather more reaction than ultramarine or Sienna, but nothing which would contra-indicate their use; a good deal of the colouring matter, however, disappeared in the course of a few weeks, leaving only a faintly-coloured spot. Gamboge produced a very violent reaction, the tatooed spot rapidly ulcerating out. The microscopical examination of the cornea of thirty frogs, which were all tatooed upon the same day with ultramarine, and one specimen examined microscopically upon each successive day, showed the different fate of the particles of colouring matter. Twenty-four hours after the operation the pigment is still chiefly adherent to the walls of the punction canals, a few particles only being found within the protoplasm of some neighbouring epithelial cells upon the surface of the cornea, but not in wandering cells. In the periphery only of the cornea are a number of wandering cells observed on their way towards the tatooed place. Gradually they reach this place, and then some of them are seen to contain particles of pigment. Their number at the tatooed spot increases until they obscure it completely; many of them are found, also, on the surface of the cornea, where an ulceration of the superficial epithelium takes place. The tracks of the needle become more and more indistinct. From the tenth day the colour of the tatooing becomes paler, and the cornea begins to get transparent again. At considerable distances from the punctures wandering cells are present between the lamellæ, some containing pigment and others none. Free particles of ultramarine are already at this period found lying free in the fibrillæ, some way from the tatooed place, transported there, no doubt, by aid of the wandering cells. On the twenty-fifth day the epithelium is completely restored, and quite free of colouring matter. The latter exists in spaces in the fibrillary tissue, which spaces are sometimes larger even than corneal corpuscles, and are situated for the most part close to the original punctures. Not more than half the pigment employed now remains in the cornea, and only a few wandering cells, none of which contain any pigment. In the blood of the frog, examined on this day, a few large white blood corpuscles were found, containing blue pigment. Still later on these disappear out of the blood. The quantity of pigment fixed in the lamellæ of the cornea does not become any further diminished. How far the results obtained by these experiments upon healthy eyes are applicable to a leucomatous cornea, Archer does not think he can decide. It would seem to the writer that experience shows leucomata to be much less irritable than the normal corneal tissue; hence, substances may be tatooed upon them with comparative immunity, which would produce inflammatory re-action in the latter tissue. A slight inflammation would in itself be of little import in most of the cases when the proceeding in question is employed, but the researches of Mr. Archer have shown the great danger of inflammation in these cases to be, that the wandering cells make away again with a great part of the pigment, and that consequently the severer the inflammation the more imperfect the result; and that the substances which produce the least inflammation are those which are most easily fixed.

Semi- or Total Decussation of the Nerve Fibres in the Optic Chiasma is a question which has been a subject of discussion in ophthalmic literature for the last two years. In 1861, Biesiadecki[1] showed by anatomical investigation, that the fibres undergo a total and not a partial decussation, as had been taught by Johannes Müller. Biesiadecki's work lay unnoticed or disregarded until Pawlowsky,[1] in 1869, Brown-Séquard,[2] in 1872, Michel and Mandelstamm,[3] simultaneously, in 1873, and Hermann Cohn[4] and Scheel[5], in 1874, all independently of each other, but some anatomically, some experimentally, and others clinically, confirmed his observation. Wilhelm Schön,[6] Gudden, and Luys advocate the opposite view. Mandelstamm communicated a preliminary notice of his first paper to the *Centralblatt*, of which an extract was made at the time in this GAZETTE (No. 14, 1873.) He examined the chiasma anatomically by hardening fresh preparations in a one per cent. solution of chromic acid for two or three days, and then in absolute alcohol for twenty-four hours longer; the preparation was then placed in a concentrated solution of potash, to dissolve the cellular tissue, and in this fluid, by aid of strong artificial light, the isolation of the nerve fibres was carried out. The author convinced himself that a total crossing of these fibres took place. Horizontal sections of the chiasma were also examined under the microscope, but, he says, this method contains sources of error which must be carefully guarded against. Mandelstamm experimented on rabbits by dividing the tractus opticus of one side completely. In the course of three or four weeks atrophy of the *opposite* optic nerve could be observed with the ophthalmoscope, while the nerve of the corresponding side remained perfectly normal. *Post mortem* examination at a later period confirmed the ophthalmoscopic diagnosis. Mandelstamm thinks, that cases of Hemiopia are much more satisfactorily explained by means of the total than of the partial decussation. A lesion occurring in the anterior angle of the chiasma, involving only a portion of the nerve fibres, will paralyze the inner halves of the retinæ, producing double temporal hemiopia. A lesion taking place in the posterior angle of the chiasma will cause nasal hemiopia, a condition the occurrence of which cannot be explained if there be only a partial decussation. A lesion in the external angle of the chiasma, in the fissure of Sylvius, must paralyze the corresponding side of each retina, producing hemiopia of the opposite side of the fields of vision. These lateral hemiopiæ are much more explicable with complete than partial decussation, if it be remembered that the outer angle of the chiasma has such close vascular relations, which may readily give rise to various diseased conditions (embolism, apoplexy). The cases of aphasia associated with lateral hemiopia published by Bernhardt[7] are, Mandelstamm thinks, an important additional proof of the complete decussation. In aphasia the walls of the left fissure of Sylvius most commonly are affected, and in all the cases published of aphasia with hemiopia, the latter was on the right side, corresponding to a lesion in the left side of the brain. By the partial decussation the lesion should be in the course of the left tractus opticus to cause right hemiopia, and a second lesion in the Sylvian fissure must be supposed to account for the aphasia. If the decussation be complete, one lesion, situated in the left fissure of Sylvius, would be sufficient to account for both aphasia and hemiopia. According to Michel the mode of crossing of the nerve fibres in the chiasma of the various classes of the animal king-

(1) Ueber das chiasma nervorum opticorum des Menschen und der Thiere. Wien. Sitzungsb. d. math.-naturwiss, Classe Bd. 42. Jahrg., 1861: p. 86.

(1) Chiasma Nervorum Opticorum. Inag. Dissert. Moscow, 1869. Quoted from Mandelstamm, *loc. cit.*

(2) *Arch. de physiol. norm. et pathol.*, IV., 2, 72. (Quoted from Michel loc. cit.)

(3) A. v. Graefe's Archiv. Bd. XIX., p. 39-58, and 59-86 respectively.

(4) Ueber Hemiopia bei Hirnleiden. *Monatsbl. f. Augenhlk.* Juni-Juli, 1874.

(5) Inaugural Dissertation. Rostock, 1874.

(6) Die Lehrevom Gesichtsfelde und seinen anomalien. Berlin, 1874.

(7) *Berl. Klin. Wochensch.* 1872. No. 39.

dom is different, and may be regarded as almost typical for each. In fish the right tractus opticus simply crosses over its fellow. In the amphibiæ and birds the decussation is in the form of a very coarse plait, each division of which is made up of a great number of nerve fibres. In mammals the form is also that of a plait, but of a very fine description. The finest plait of all, perhaps, is that in the human chiasma, and nothing in the way of a commissural fibre is found. Michel examined the chiasma of a dog which had a congenital malformation of the right eye. Even macroscopically the small size of the right optic nerve, and of the left tractus opticus, could be observed, while microscopically the nerve fibres were found atrophied in the right optic nerve, and on their course through the chiasma to the left tractus opticus, and also in the latter. None but healthy fibres, on the other hand, were observed passing to the right tractus opticus.

Brown-Séquard has found that complete division of the chiasma in the median line produces absolute amaurosis of each eye, and that complete division of one optic tract causes absolute amaurosis of the opposite eye without affecting the eye of the corresponding side. Cohn publishes five cases of hemiopia (four due to apoplexy) which he examined with Förster's perimeter. Bernhardt, also, examined one of his cases with the perimeter; and there is one case perimetrically examined by Förster(1) himself, and one by Illing.(2) In each of these eight cases, a peripherical defect in the remaining half of the field of vision has been found. Manthner(3) only, has examined one case where there was a vertical line of demarcation, and no peripheral defect in the good side of the field. Therefore, a peripherical defect is, probably, the usual condition in hemiopia, and it argues strongly for complete decussation; because if the decussation be only partial a second hæmorrhage in the other tractus opticus must have existed in six of the recorded cases to cause this peripherical defect. Such an occurrence is not impossible, but in the highest degree improbable. If the decussation be complete, one hæmorrhage, situated say in the right angle of the chiasma, will first paralyze the outer half of the right retina, and the inner half of the left retina (left hemiopia), and then if it extend a little beyond the middle line of the chiasma it will paralyze a small portion of the left half of each retina, causing the peripheral defect in question. A case of right hemiopia of traumatic origin recorded by Cohn, speaks strongly for total decussation. It is the second case of hemiopia on record which recovered.(4) The field of vision did not clear up symmetrically in each eye, but improved much more rapidly in the right than in the left eye. It would be most difficult to account for this by the partial decussation, whereas a hæmorrhage in the left Sylvian fissure, which afterwards became absorbed, would rationally explain the phenomenon, if the decussation be complete. Schön maintains the partial decussation. He himself has made neither anatomical investigations nor experiments, but argues chiefly from a clinical point of view. He thinks that the impossibility of explaining nasal hemiopia by the semi-decussation speaks in favour of the latter, for he says that this form of hemiopia has been extremely rarely seen. Mandelstamm, in his reply, does not regard it as by any means so rare, and mentions two cases he has observed himself, besides several by other authors. Schön's principal objections to the complete decussation are, that it cannot explain the sharp boundary which the fields of vision have in equilateral hemiopia; that, inasmuch as this form of hemiopia is often associated with other disturbances, whose cause must be sought for in one of the hemispheres of the brain, a semi-decussation alone is reconcilable with these cases; and, that the favourable prognosis, *quoad cæcitatem*, which such cases clinically admit of, cannot be understood if the crossing be complete. Cohn, however, in his paper shows that the line dividing the blind from the seeing half of the field of vision, when accurately examined with the perimeter, is found to be in fact more or less irregular, and Mandelstamm maintains that a lesion affecting the island of Reil and the motor gangliæ will readily complicate the external angle of the chiasma, so as to produce lateral hemiopia with total decussation, and that there is no reason why the latter anatomical arrangement should make the prognosis, *quoad cæcitatem*, any other than it is known to be. Gudden,(1) of Munich, supports the partial decussation by original anatomical investigations. According to his view, in all animals in which the field of vision is not common to both eyes, there is complete decussation in the chiasma, while in all that have a common field for both eyes (consequently in man), the optic nerves cross each other only partially. He believes, that the only true method of ascertaining the anatomy of the chiasma is by a continuous series of horizontal sections, and finds by their aid that the decussating fibres lie chiefly in the under half of the chiasma, and the non-decussating in its upper half. He does not recognize an anterior commissure of the chiasma, but asserts that a posterior commissure is present, although it stands in no physiological relation to the optic nerves.

A very interesting discovery of Biesiadecki's is corroborated and supplemented by Michel. He has found, namely, that there is a space situated over the chiasma, which stands in direct communication with the third ventricle. When Michel slowly injected a solution of Berlin blue into one of the lateral ventricles of a dog, this space became easily filled with the fluid, and by continued injection the upper and anterior wall bulged out over the anterior angle of the chiasma. Michel thinks therefore that fluid may pass from the ventricles into this space, and according as lies in it more to the right or to the left, anteriorly, or posteriorly, it may press differently on the nerve fibres, and cause different forms of hemiopia, or, perhaps, the space might be so completely filled, as to cause complete paralysis of the chiasma.

Transplantation of the Conjunctiva of a Rabbit to the Human Eye.—This operation was first performed by J. B. Wolfe, and described by him in a paper(2) read before the Medico-Chirurgical Society of Glasgow, in December, 1872. The proceeding has been cultivated, also, since then by Wecker(3) and Otto Becker,(4) and is highly recommended by them in cases of Symblepharon. After having placed the rabbit under the influence of chloroform, Wecker dissects off the entire ocular conjunction and that of the cul-de-sac, so as to obtain a flap measuring from 3 to 3½ by 1 to 1½ centimetres. The flap is placed with its epithelial surface undermost, on a small plate of glass, over a vessel of hot water, so that it may be kept warm and moist. The patient's eye is then prepared by the symblepharon being separated, &c. Then the flap from the rabbit's eye is carefully adjusted to the raw surface,

(1) *Annales d'Oculistique.* LIX., p. 22.

(2) Wien. Med. Zeitung, Nos. 23, 24, and 25. 1874.

(3) Oesterreichische Zeitschrift für praktische Heilkunde. 1872.

(4) The first was by Von Graefe. Zehender's *Klin. Monatabl.* 1865: p. 274.

(1) *Zeitschrift für Psychiatrie* XXX. 1. *Archiv. f. Ophthal.* XX. 2. Luys is another author, quoted by Schön, who, in his *Recherches sur le System Nerveux*, desires to establish the partial decussation by aid of his original anatomical researches. The writer has not been able to obtain this work.

(2) *Glasgow Medical Journal*, 1873.

(3) *Annales d'Oculistique*, LXXI., 127, and LXXIII., 131.

(4) Ueber Einheilung von Kaninchenbindehaut in den Bindehautsack des Menschen. *Wien. Med. Wochensch.* No. 46, 1874, and Annales d'Oculistique, LXXII., 219.

and fixed in its place by aid of a great number of very fine sutures around its margin. For a symblepharon of the lower lid a score of sutures at least are necessary. Besides these, a suture is passed through the centre of the flap and through the eylid, and fastened on the cheek. Wolfe and Becker use only four sutures. After a certain time the transplanted mucous membrane seems to become absorbed and replaced by a membrane "differing in nothing from the mucous membrane which had existed in the patient," and an important fact is that this substitution takes place without contraction of the neighbouring parts. In one case of partial symblepharon, Illing(1) grafted flaps of the mucous membrane from the inner surface of the upper lip of the patient, and from the lip of a friend of the patient's, with a satisfactory result. In another case he employed two flaps of mucous membrane from the vagina, with a similar result.

Extracts from Journals.

TREATMENT OF EPISTAXIS.—Dr. Beverly Robinson reports in the *N. Y. Medical Record* of March 20th, a case of obstinate epistaxis, in which after all the usual means of checking the bleeding, short of plugging the nares, had failed, compression of the facial arteries upon the superior maxillary bones, succeeded in arresting the flow. Iron, quinine, and ergot were also given at the same time; but, previous to the adoption of this plan, without effect. The compression was made upon the arteries, just before they reach the alæ of the nose, by means of two small pads made of lint. These were sewed to a piece of tape at the proper distance from one another, and the ends of the tape were passed across the cheeks and above the ears, and tied securely behind the occipital bone. Dr. Robinson does not believe that by compression of the facial arteries we shall be able to arrest all cases of bleeding from the nose. However, it may frequently be adjoined to other treatment with marked benefit to the patient, and by itself may prove of the greatest utility in exceptional circumstances where other means are not at hand. Many of the worst cases of epistaxis originate from the septum, and it is this portion of the nasal passages which receives its arteries mainly from the terminal branches of the facial. By compression of the arterial trunk, the afferent blood supply must be greatly diminished, if not absolutely stopped.

EMPLASTRUM HYDRARGYRI IN SYPHILIS.—Prof. Doutrelepont, *Allegm. Med. Centr. Zeitung.*, recommends the local application of *emplastrum hydrargyri* in cases of syphilis. He states, that he treated most of the external symptoms with this plaster, and with the best results. In indurated chancres he observed, that, under the influence of this plaster, the base of the ulcers rapidly cleared up, while from the periphery a process of cicatrization was quickly established, the induration meanwhile disappearing.—*Boston Med. and Surg. Jour.*

SUBCUTANEOUS INJECTION OF ETHER IN COLLAPSE.—Schröder in his Midwifery (4th Ed. Bonn, 1874, p. 647), when speaking of transfusion where there is great depression after delivery in cases of placenta prævia, says that the subcutaneous injection of ether, as recommended by Hecker (*Bair. ärtzl. Int.* 1873., No. 22) will often make this step unnecessary. Hecker's plan is to inject 1.0 gramme of sulphuric ether subcutaneously, four or five times at short intervals, from which he has seen wonderful results. Schröder has tried this treatment in a case of collapse from puerperal fever, and though the patient ultimately died, still the temporary good effect which it produced was most apparent. A. V. M.

(1) Beitrag zur Casuistik der Transplantationen im Gebiete des Auges. Vienna, 1874.

ASCENDING PARALYSIS.—At a recent meeting of the *Société Médicale des Hôpitaux*, M. Dumontpallier reported the case of a man aged 46 years, whom he had treated in the Hopital Saint Antoine. The patient had been suddenly seized by weakness in both legs, and the next day was completely paraplegic. Motion was lost in both legs; sensibility remained, but it was a little blunted in the left limb. There was also incontinence of urine and fæces. An eschar soon formed on the scrotum. There was no pain in the lumbar region, or in the paralyzed limbs. The intellect was unaffected. Matters remained so for a week, after which the patient experienced a fit of dyspnœa, and complained of pain in the epigastric region. A slight fever also supervened. Auscultation revealed at first some bronchitic râles, and afterwards signs of pulmonary œdema; the dyspnœa increased more and more, and the patient soon died presenting symptoms of asphyxia. M. Dumontpallier had diagnosed an ascending hæmorrhagic central softening of the spinal cord. The autopsy confirmed this diagnosis. The grey substance of the medulla presented in its anterior column, from the lumbar ganglion to the cervical region, a red hæmorrhagic softening. M. Dumontpallier called particular attention to the rapidity of the symptoms, besides which the affection presented two distinct phases; first, the transitory weakness; then the paraplegia. He had observed the same cause in another case—that of a strong vigorous man addicted to drink, who in the street one evening, was attacked with such weakness of the legs that he had to go home in a cab. The next day he was walking as usual, when suddenly he became affected with complete and peremptory paraplegia. M. Martineau referred to a somewhat analogous communication of his to the Society some months before. It was a case of degeneration of the grey substance, and the paralytic phenomena exhibited an ascending progress. M. Paul remarked that in cases called rapidly ascending paralysis, there were not always found at the autopsy the same medullary lesions. For instance, in a case which he had observed three weeks, the same phenomena, as in the case under consideration, he found at the autopsy granular meningo-myelitis.—*Gazette des Hôpitaux.* D. F. B.

HÆMATOXYLUM IN ALKALINITY OF THE URINE.—Last year M. Cotton published in the *Lyon Médical*, a communication relative to the antiseptic qualities of this substance. According to him, fermentation cannot take place in an infusion of the wood; and if a few chips are placed in decomposing urine its odour is removed. With the object of ascertaining whether this action could take place in the animal economy, M. Cotton gave to a man, aged 45, who had suffered for twenty-three years from distressing frequency of micturition, his urine being also very alkaline, from ammonico-magnesian phosphate, and albuminous, an infusion of half a drachm of logwood night and morning. In ten days the urine had become acid and free from crystals of the triple phosphates. The proportion of albumen was not changed, but there was a marked diminution in the frequency of micturition.—*Connaissances Méd.*, April 15.

TREATMENT OF ECZEMA.—In Hebra's clinic, a patient with eczema of some duration, affecting all the limbs equally, was treated as follows: One arm was wrapped in rubber cloth, and the other was treated with corrosive sublimate, one grain to the ounce of water. One leg was treated with diachylon ointment, and the other with tar. These methods of treatment have been continued some time, and the leg treated with diachylon ointment is recovering most rapidly, while the arm treated with mercury is the slowest in its progress.—Vienna Correspondent of *Boston Med. and Surg. Jour*

PRODUCTION OF METEORISM.—M. Leven has reported to the Biological Society of Paris the results of various experiments which he has made on animals respecting the composition, production, and effects of gases in the stomach and small intestines. His conclusions, which are of much interest in elucidating the pathology of dyspepsia, are opposed to some generally entertained opinions. When an animal is opened after death gases are found in the intestines, and physiologists say that these gases proceed from the reaction of the alimentary substances on one another. M. Leven maintains that this explanation is incorrect; that no alimentary substance ferments; and that the term "ferment" applied to pepsine is not exact, as pepsine does not act in the manner of a ferment, but has a fixed action, and modifies the physical state of the alimentary substances so as to render them absorbable. The fluids of the digestive tube preserve, but do not decompose the alimentary substances. M. Leven, in his experiments upon dogs, has never found inflammable gas: the only gases he has found being oxygen, nitrogen, and carbonic acid. He never failed to find nitrogen, but oxygen and carbonic acid have been in some instances entirely absent. The same gases have been found in the stomach and in the small intestines. Applying these results, M. Leven considers that the production of meteorism is not alone due to gas, but to paralytic distension of the muscular fibres of the stomach and intestines, produced by the introduction of hard, ligneous, indigestible matters, which irritate the muscular system even before digestion commences. To demonstrate this he introduced air into the digestive organs of a dog; the animal was seized with dyspnœa and muscular trembling, but recovered in half an hour. M. Leven deduces from this fact that alimentary substances do not of themselves change either the nature or quantity of the gases in the stomach or intestines; and that as in flatulent dyspepsia the gases do not result from alimentary decomposition, the principal cause of the phenomena observed, is paralysis of the muscular tunic of the digestive tube.—*Gazette Hebdomadaire.*

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USE OF THE STOMACH PUMP.—Washing out of the stomach, and the aspiration of liquids secreted by it, is more and more practised in Germany, since Kussmaul highly praised this method. Dr. Schliep uses it in nearly all affections of the stomach, especially in chronic gastritis, with or without dilatation. The cure of chronic catarrh, according to his account in the *Deutsche Klinik*, Vol. XIV., would require but a limited number of applications. In simple catarrh, five would suffice on an average. He uses this method even in the dyspepsia of consumptive patients. In dilatation of the stomach he empties that organ with the pump every day. He performs the washing out even in cancer with pure water; or adds bicarbonate of soda to the water, if the liquids be very acid; or permanganate of potash, if these liquids show signs of fermentation; carbolic acid, when they contain vegetable parasites; boracic acid, as a disinfectant; and tincture of myrrh, in atonic dyspepsia with abundant secretion of mucus.—*British Med. Jour.*

TREATMENT OF PERITONITIS.—M. Netter proposes in acute peritonitis to make a small incision in the abdominal walls, and inject through a cannula fixed in the wound a quantity of lukewarm water sufficient to produce artificial ascites; then to let the water flow out, and if an improvement follows to repeat the injection. He recommends this mode of treatment from the consideration that in acute peritonitis the liquid secreted has no injurious effects unless it is concentrated, and that it becomes innocuous in proportion to its attenuation.—*Revue Médicale de l'Est.*

FRACTURE OF THE ORBITAL PLATE OF THE FRONTAL BONE.—Most of our readers will recollect the interesting cases of fracture of the orbital plate of the frontal bone, published by Dr. J. Stannus Hughes, Professor of Surgery in the Royal College of Surgeons, Ireland, in the IRISH HOSPITAL GAZETTE (Vol. I., p. 241). The following cutting from the Medical News Column of our excellent contemporary the *N. Y. Med. Record*, affords an additional illustration of the mode in which this accident may occur:—"Dr. W. R. Gilmore, ambulance surgeon at the Reception Hospital in Ninety-ninth street, died on Friday, the 29th ult., at the Hospital, from the effects of a very curious wound, received on the Sunday previous, when he was walking out in the neighbourhood of the Hospital with the House-Surgeon, Dr. Goelet. The sidewalks were very slippery from the snow-storm, and Dr. Gilmore slipped and fell. The point of the umbrella which he was carrying entered his eye, inflicting a painful and dangerous wound. He walked back to the Hospital, and was attended by Prof. Jas. R. Wood and others, until his death, as above stated. The deputy coroner, on examination, decided the cause of death to be compression of the brain and fracture of the orbital plate." Another similar case recently came under observation at Jervis-street Hospital.

LOCAL AND GENERAL DIPHTHERITIS.—Local diphtheritis is regarded by Dr. Ludwig Letzerich as a contagious malady affecting the mucous membrane, and composed of low organisms which, if they enter into the circulation, spread throughout the entire body, multiply, and produce a general diphtheritic affection. The changes which these bacteria, plasmatic granulations, or micrococci produce, whether primarily in local nodules, or secondarily in the parenchyma of the kidneys, spleen, lungs, liver, or heart, differ in their details, but result from the same principle. They consist in the first instance of disturbance of the nutritive process arising from emboli formed by these organisms, or an interruption of the circulation. In the second place there follows under the influence of this proliferation, a rapid destruction of the cellular elements, and their nearest derivatives, so that renal cells, hepatic cells, contractile muscular substance, and even bony structure, disappear. In this way these organisms produce considerable mischief, if not complete destruction. This theory of emboli caused by the proliferation of living animals chiefly in the form of micrococci, accounts satisfactorily for the secondary affections. The toxic effects produced on the system by the products of decomposition, are perhaps to be accounted for in the same way; but this is a subject which is still in its infancy.—*Virchow's Arch ;* and *Gazette Hebdomadaire.*

METACHLORAL.—M. Dujardin-Beaumetz reports that he finds in metachloral a useful substitute for iodoform in the treatment of ulcers, &c. A serious objection to the use of the latter agent is found in its very persistent and insupportable odour. From this objection the metachloral is entirely free.—*Philadelphia Med. Times.*

BROMIDE OF LITHIUM.—At a meeting of the *Académie de Médecine* on April 13th, M. Rouband read a paper of which the following are the conclusions:—1. Bromide of lithium is a drug which has a two-fold action. 2. It possesses in a high degree the lithontriptic qualities which are universally recognized in the salts of lithia. 3. It affects reflex sensibility in a more energetic manner than the other bromides, without the unpleasant effects on the heart which the bromide of potassium has. 4. Consequently it takes its place in the first rank of antilithic and sedative drugs, and its action is especially valuable in cases of the uric acid diathesis which are accompanied by painful phenomena, and in the neuroses which are so often associated with the presence of uric acid.—*Rév. de Thérapeutique.*

CHANGES IN THE PERIPHERAL NERVES AND SPINAL MARROW IN CHOREA.—In an autopsy made by Dr. Elischer on the body of a woman, who died of puerperal metritis while affected by chorea, he observed specially the appearance of the median and sciatic nerves, the spinal marrow, and the encephalon. While the median nerve in the normal state forms a whitish grey cord, with a somewhat reddish reflection, and in which white predominates more and more as the nerve sends out branches, the nerve of the choreic patient is of a dirty grey colour, bordering on yellow, acquired from the large quantity of connective tissue with which it is united. This connective tissue is very fibrillar, and at its periphery, isolated granular cells, and, in addition, a large number of fusiform nodules are met with. In the spaces formed by the neuroglia between the nerve-tubes, a large number of nodules, finely granular, and collected together in variable quantities, are also seen. As to the nervous substance itself, its sheath is thickened, and in some places appears as if vitrified, and the axis cylinders have partly disappeared. Small sanguineous extravasations are found in the connective tissue. The sciatic nerve presents more marked changes. There is a decrease in the number of the nerve-tubes, the vessels are engorged with blood, and there are more numerous extravasations. In the connective tissue there is an enormous quantity of fusiform elements, and the great amount of nuclei in the substance of Schwann, can only be compared to that observed in infantile paralysis. The spinal marrow exhibits thickening of the meninges, hyperæmia, and the blood vessels lengthened, thickened, and tortuous. The thickening is produced at the expense of the adventitious membrane, which presents, as well as the capillaries, septa abounding with proliferation of nuclei. The central canal shows serous dropsy and alteration of its epithelial coats. In the grey substance, the four principal groups of ganglionic cells are separated by connective tissue containing isolated nuclei, which become very numerous in the gelatinous substance of Rolando. The ganglionic cells present a rough appearance; and those in the anterior horns of the cervical and dorsal marrow are no longer stained by a carmine solution; there are no yellowish-red nuclei with pigmentary matter; the cells are surrounded by a clear zone, having two or three cells containing dark nuclei. The nerve trunks, which issue from the marrow, present alterations analogous to those of the median and sciatic nerves, but less advanced.—*Virchow's Archives*, and *Gazette Hebdomadaire*.

TO POWDER CAMPHOR.—G. T. Eberts, in the *Pharmaciet*, says that the methods and suggestions for powdering camphor and retaining this refractory body in its powdered state, have not alone been numerous but curious. Glycerine is the simplest and most efficient substance to keep camphor in a finely-divided state. Take camphor 5 oz., alcohol 5 fluid drachms, glycerine 1 fluid drachm. Mix the glycerine with the alcohol and triturate it with the camphor until reduced to a fine powder.

INTERCELLULAR CEMENT OF EPITHELIUM.—Dr. Richd. Thoma, Heideberg, describes a new mode of colouring the framework of cement which connects the cells of epithelium. A pure solution of indigo is prepared by diluting a carefully filtered saturated watery solution with an equal quantity of distilled water. This is injected into the abdominal vein of a frog at a constant pressure of a few centimeters of water, and at the same time the mucous membrane is constantly irrigated with a 1·5% solution of chloride of sodium. After a few hours the cement framework (Kittleisten), becomes deeply coloured, the epithelial cells remaining pale.—*Centralblatt*, No. 2, 1875.—G. F. Y.

EXPERIMENTS ON THE GLOSSO-PHARYNGEAL NERVE.—M. Vulpian has presented to the *Académie des Sciences* a paper on the vaso-dilator action exercised by the glosso-pharyngeal nerve on the vessels of the mucous membrane at the base of the tongue. He experimented upon dogs curarized and subjected to artificial respiration. After dividing the glosso-pharyngeal without anything worthy of notice being observed on the mucous membrane of the tongue, an induced intermittent current was passed across the peripheral end during two minutes. This produced a congestive blush, first of the base of the tongue, and afterwards of the epiglottis as far as the calciform papillæ, but only at the affected side. As the same phenomena are observed after section of the lingual, the hypoglossal, and of the pneumogastric, which communicate by anastomosis with the glosso-pharyngeal, M. Vulpian concludes that the glosso-pharyngeal exercises the vaso-dilator action on the vessels at the base of the tongue through their proper fibres outside the cranium. These facts are not surprising, as it is acknowledged after the works of M. Chauveau, that even at its origin, the glosso-pharyngeal is a mixed nerve.—*Gazette des Hôpitaux*.

COLOUR OF THE MACULA LUTEA.—Professor Schmidt, of Marburg, takes exception to the usual description of the so called macula lutea, which, he states, though generally described in anatomical text-books as being of the colour its name implies, is really a dark reddish brown during life and for some time after death. This he found by examining the human fundus half an hour after death, when the same dark shade was found which is familiar as the colour seen with the ophthalmoscope. —*Centlb.* 57, 1874.—G. F. Y.

TREATMENT OF HOOPING-COUGH.—Wilde claims that he can cure every case of hooping-cough within eight days by the following treatment:—The patient is not to leave the room, and at every access of coughing is to hold before his mouth a small piece of cloth, folded several times, and wet with a teaspoonful of the following solution: ether, 60 parts; chloroform, 30 parts; turpentine, 10 parts.—*Deutsches Archiv.* and *N. Y. Med. Rec.*

BENZOIC ACID IN AMMONIACAL CYSTITIS.—Gosselin and Robin (*Archives Général. de Méd.*, Nov. 1874), advise the use of benzoic acid as a corrective to the ammoniacal state of the urine. The drug may be given dissolved in large quantities of water, or suspended in mucilage. The initial dose is 15 grains, but it should be rapidly increased to 45 or 60 grains, and may even be carried in some cases to 90 grains; at this dose, however, heat and dryness of the fauces begin to be complained of. The action of the acid upon the altered urine is not immediately recognized; but, in seven or eight days the ammoniacal character and fœtidity generally disappears, and phosphatic deposits cease to form. The conclusions of this article are as follows:—1. The ammoniacal state of urine causing a large part of the accidents which follow operations on the urinary organs, it is desirable to diminish or suppress that condition. 2. Benzoic acid, balsams which contain it, and probably other vegetable products (salicine, cinnamic acid, etc.), produce this result. 3. Hippuric acid, which is the product, acts in several ways:—(*a*) by forming hippurate of ammonia, which is less toxic than carbonate of ammonia.—(*b*) by retarding the decomposition of the urine, and consequently the production of the carbonate of ammonia.—(*c*) by preventing the formation of insoluble phosphatic deposits which are the cause of cystitis and the origin of calculus. 4. The administration of benzoic acid is advisable for patients suffering from ammoniaco-purulent cystitis, and particularly for those who are to undergo operations upon the urinary organs.—*Boston Med. and Surg. Journal.*

SUTURE OF TENDONS.—M. Tillaux exhibited lately to the Surgical Society of Paris, a man who four months previously had received on the hand a violent stroke of a carter's hook which penetrated under and divided the tendons of the little finger and ring finger. A month after this accident the patient sought advice for a contusion of the knee. The wound of the hand was at the time healed and the two fingers flexed. M. Tillaux proposed to improve the state of the hand, and the patient having consented, he operated nearly two months after the occurrence of the injury. Having applied Esmarch's bandage around the hand and fore-arm he was able to proceed without being incommoded by the flow of blood, and easily found the peripheral ends of the tendons, but the other portions having retracted considerably, could not be discovered. Grasping with a forceps the undivided tendon of the middle finger, he made a button-hole slit in it, through which he carried the ends of the cut tendons, after having pared and scraped them a little with the bistoury, more however as a matter of precaution than as an absolute necessary procedure. He bound the entire together by means of a metallic suture, closed the wound, covered the limb with wadding and fixed it immovably. At the end of fifteen days the new wound was healed, the fingers had regained their normal position and motion was re-established. There was, however, some restraint in consequence of a slight adhesion of the tendon to the skin at the line of suture. The patient had also been wounded in the little finger ten years before and never since had complete use of it. M. Tillaux drew particular attention to the length of time that elapsed between the receipt of the injury and the operation. M. Pollailon remarked that in 1873 he published a case in which the tendons of the ring, middle and index fingers had been divided at the wrist by glass. The first dressing applied at a pharmacy was kept on three days, after which the patient went to Hospital. The three fingers were then motionless. The superior ends were found with difficulty, the tendons were sutured with wire, the hand was enveloped in wadding, and union was obtained in six weeks. The tendons were adherent to the skin at the line of the wound, but extension had been preserved and motion was re-established to such a degree that the patient was able to write. M. Le Fort mentioned a similar case in which he operated the previous year. The patient fell on a hatchet and cut nearly all the flexor tendons. The supinator longus and the radial artery escaped. After applying Esmarch's bandage M. Le Fort ligatured the two ends of the ulnar artery. He found the peripheral ends of the tendons easily, but even after having denuded half an inch about their sheaths he was unable to discover the central ends. He then placed the fore-arm on a table and by energetic friction from above downwards succeeded in pressing out and catching the tendons, but as it was impossible to determine to what muscle any of them belonged, he sewed together the superficial layer, and similarly sewed together the inner layer. In six weeks or two months cicatrisation was perfect, and the movements were preserved. M. Anger reports a case which shows the possibility of re-uniting and re-establishing the functions of tendons which have been several months divided. A man whose little finger was permanently flexed in consequence of the tendons having been divided six months previously, sought his assistance. Having administered chloroform he made a longitudinal incision of four inches at the ulnar side of the back of the hand and found the common and proper extensor tendons, the extremities of which were more than two inches apart and adherent to the fibrous tissue of the cicatrix. He isolated them and passed through them a silver thread, traction upon which when the hand was extended failed to bring the divided portions closer than three quarters of an inch. He tied the threads and dressed the wound, hoping that inflammatory action would form a cicatrix sufficiently extensive to unite the tendons by intermediate tissue, and so enable the finger to regain its power of motion. The wound granulated rapidly, and three weeks after operation the threads came away spontaneously in the dressing. When healed, the finger was quite straight; flexion was a little difficult at first, but after the exercise of a few weeks it became scarcely less perfect than in the other fingers.—*Gazette des Hôpitaux.*

D. F. B.

SUSPENDED ANIMATION IN NEW-BORN CHILDREN.—Place the child flat on its back; then putting one hand to support its back and shoulders, apply the other hand to the belly firmly enough to force the intestines backwards and the diaphragm upwards. Just as you are ready to do this, raise the child by the hand, or the neck and shoulders "*sur son séant,*" thus creating an opportunity for a vacuum; then removing the hand from the belly, lower the child on to its back again. Continue these motions alternately until respiration is established. With this rocking to and fro, with the hand first on the belly and then off it, air is heard to enter and leave the chest. It can be continued longer than other methods with less fatigue to the operator, as he sits beside the child, and need not vary his position. Dipping the child first in warm water and then in cold is an excellent additional aid, but often in the excitement of the occasion and in the hovels of the poor, one finds no warm water, or fire, or tubs.—*Boston Med. and Surg. Jour.*

CHLOROFORM IN THE SURGICAL TREATMENT OF CHILDREN.—Dr. Bergeron, in a work on the exhibition of chloroform to children, announces the following conclusions:—Chloroform, which in moderate doses, intelligently and prudently administered, is not a poisonous agent, may cause death in adults; but it is endowed with a harmlessness almost absolute in the case of children. This harmlessness is due to the very nature of the functional phenomena, and principally to this, that the child has not arrived at the age of reason, feels no moral emotion, experiences no apprehension of danger, and thus is saved from the apnea which great terror or extreme emotion produces, and which, by the method of exclusion, has been found the most important cause of sudden deaths during the administration of chloroform. Chloroform may be administered to a child in the first days of existence. It should be given to spare the pain of surgical operations, and whenever sudden movements or muscular contractions may hinder the surgeon from obtaining the result of his operation.—*Gazette des Hôpitaux.*

RATIONAL TREATMENT OF PERTUSSIS.—Considering hooping cough as an affection in which spasmodic cough accompanies catarrh of the trachea and bronchi, and looking upon it as established that the spasmodic cough depends on excitement of the superior laryngeal nerve, Dr. Wolkenstein is of opinion that the first indication in the rational treatment of the affection is to diminish the excitability of that nerve. He has made several experiments with narcotics upon dogs, cats, and rabbits, by injecting either subcutaneously or into the digestive tube, bromide of potassium, belladonna, chloroform, hyoscyamus, aconite, alcohol, morphia, cyanide of potassium, perchloride and subchloride of mercury, and hydrate of chloral. On exciting the mucous membrane of the larynx with a feather, violent cough and closure of the glottis were produced by reflex action, but if some of the above drugs had been administered no cough took place. Morphia was the most active. Belladonna, chloroform, aconite, hyoscyamus, corrosive sublimate and calomel, gave no results. He ranges the active remedies in the order of strength as follows:—Morphia, hydrate of chloral, bromide and cyanide of potassium. He obtained analogous results in treating his patients.—*Centralblatt.*

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